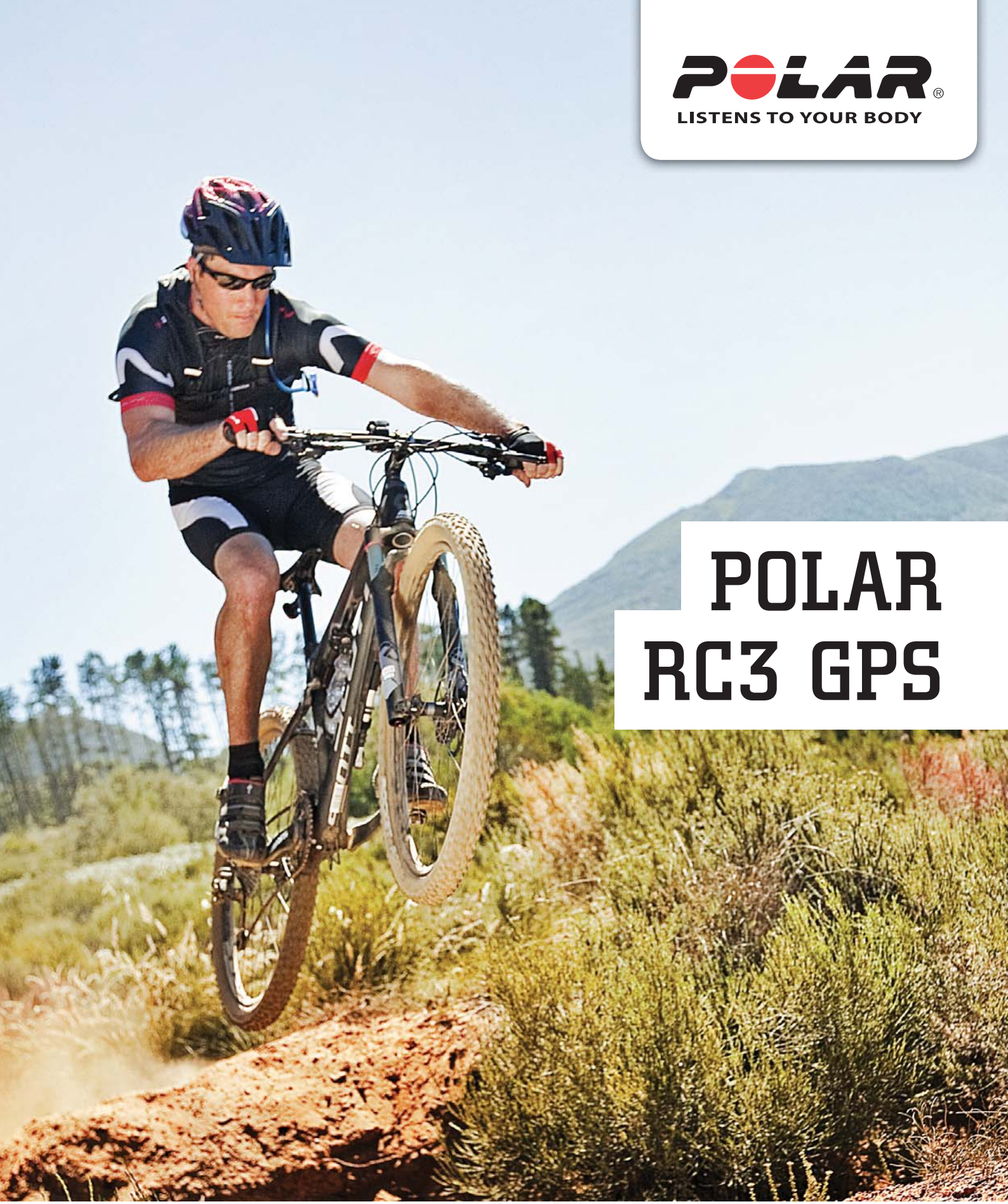
POLAR®
LISTENS TO YOUR BODY



POLAR RC3 GPS

User Manual

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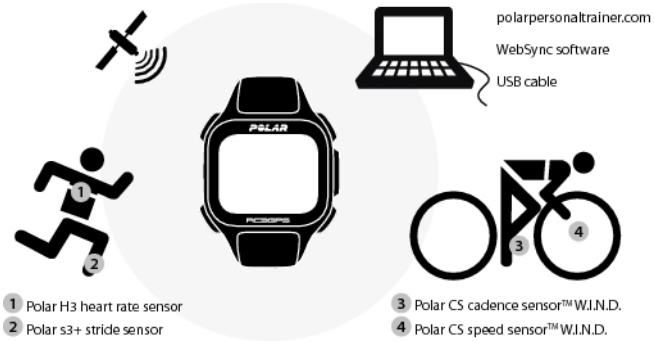
1. INTRODUCTION

Congratulations on the purchase of your Polar RC3 GPS™ training computer! The training computer offers you an all-in-one system to guide you in your training.


polarpersonaltrainer.com
WebSync software
USB cable
1 Polar H3 heart rate sensor
2 Polar s3+ stride sensor
3 Polar CS cadence sensor™ W.I.N.D.
4 Polar CS speed sensor™ W.I.N.D.

This user manual includes complete instructions to help you get the most out of your training computer.

The latest version of this user manual can be downloaded at www.polar.com/support [http://www.polar.com/support]. For video tutorials, go to http://www.polar.com/en/polar_community/videos.

Key Features and Benefits

Slim Integrated GPS: RC3 GPS is all you need for tracking your speed, distance and route. The slim and lightweight training computer has a built-in GPS and rechargeable battery.

Back to starting point: This feature guides your way back to the starting point of your trip.

Training Benefit: This feature helps you better understand the benefits of your training by giving instant, textual feedback on your performance.

Web Training Diary: Share your route and distance with others at polarpersonaltrainer.com.

Running Index: Monitor the efficiency of your run with this feature. Running index is calculated automatically after every run, based on heart rate and speed data.

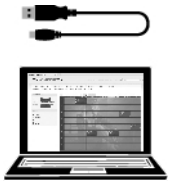
Sport Profile: Start your training session with ease: the training computer provides five sport profiles; one for running, two for cycling and two for other sports.

Polar Sport Zones: To help you train at the right intensity, lock you target sport zone for a training session. When your heart rate goes below or above the target sport zone, the RC3 GPS gives a visual and audible alarm.

2. THE ALL-IN-ONE TRAINING SYSTEM

Training Computer Parts

With an integrated GPS unit, the **Polar RC3 GPS training computer** provides speed and distance data, as well as route information at polarpersonaltrainer.com web service, in all outdoor sports using Global Positioning System (GPS) technology. Signals that GPS satellites transmit to the earth indicate the location of the satellites. The training computer receives the signals and determines your location by measuring the distance between itself and the satellites. There are at least 24 active GPS satellites orbiting around the earth. To get a reliable location reading, the training computer combines the signals from at least four satellites.



Connect the training computer to your computer with a **USB cable** to charge the battery and to transfer data between the training computer and the polarpersonaltrainer.com web service.

Register your Polar product at http://register.polar.fi/ to ensure we can keep improving our products and services to better meet your needs.

Training Software

With **WebSync software** you can

- synchronize and transfer data between your training computer and polarpersonaltrainer.com,
- adjust your training computer settings, and
- customize your training computer display for example with your own logo.

For more information on data transfer and other functions in the WebSync software, consult the full user manual at www.polar.com/support [http://www.polar.com/support] or the online help for WebSync.
The WebSync software can be downloaded at www.polarpersonaltrainer.com [http://www.polarpersonaltrainer.com].

Polarpersonaltrainer.com is your online training diary and interactive training community that keeps you motivated. For a deeper analysis of your training, transfer the training data to the polarpersonaltrainer.com web service using the USB cable and WebSync software.
With the **polarpersonaltrainer.com web service** you can

- see your training route
- share your training result as your status update in a social network
- challenge your friends to virtual sports competitions
- get more detailed information on your training feedback
- store your training files and follow up your progress
- follow your training load and recovery in the training diary
- create and download the Polar Endurance training programs onto to your training computer and utilize them in your training, and
- create your own training targets

For more information on the functions in the polarpersonaltrainer.com web service, consult the online help for polarpersonaltrainer.com.

The username for your Polar Account is always your email address. The same username and password are valid for Polar product registration, polarpersonaltrainer.com, Polar discussion forum and Newsletter registration.

Available Accessories

With the help of Polar accessories, you can enhance your training experience and achieve a more complete understanding of your performance.

The RC3 GPS training computer is compatible with **Polar H2** and **H3 heart rate sensors**. The comfortable heart rate sensor detects your heart rate accurately from the heart's electrical signals and sends the data to the training computer in real time.
The heart rate sensor consists of a connector and a strap.

If you bought a set which does not include a heart rate sensor, turn it off in settings for the Sport Profiles. For instructions, see Sport Profile Settings (page 29).

Optional **Polar s3+ stride sensor*** helps you to improve your running technique. It wirelessly measures speed/pace, distance, running cadence, running index and stride length, whether you train indoors or out.

Optional **Polar CS cadence sensor W.I.N.D.** wirelessly measures cycling cadence, i.e. your real-time and average pedaling rate as revolutions per minute.

Optional **Polar CS speed sensor W.I.N.D.*** wirelessly measures cycling distance and your real-time, average and maximum speeds/paces.

Data from all compatible sensors is sent wirelessly to the training computer over the 2.4 GHz W.I.N.D. technology, proprietary to Polar. This eliminates interference during training.

*When using the training computer with s3+ stride sensor or CS speed sensor W.I.N.D., the training computer retrieves speed and distance data from the sensor and the GPS will only be used for location and route tracking.

Button Functions

The training computer has five buttons that have different functionalities depending on the situation of use.

LIGHT	BACK	START/OK	UP	DOWN
• Illuminate the display • **Press and hold** to enter **QUICK MENU**: In time view lock buttons, set alarm or select time zone. During training lock buttons, search sensor, adjust training sounds, set automatic lap on/off, show GPS info or show zone limits. For more information on the quick menu, see Quick Menu (page ?).	• Exit the menu • Return to the previous level • Leave settings unchanged • Cancel selections • **Press and hold** to return to time mode from any other mode	• Confirm selections • Start a training session • Take a lap • **Press and hold** to set zone lock on/off in training mode.	• Move through selection lists • Adjust a selected value • **Press and hold** to change the watch face.	• Move through selection lists • Adjust a selected value • **Press and hold** to switch between Time 1/ Time 2.

Menu Structure

Data

Follow up on your training data. For more information, see After Training (page 23).

Settings

Customize your training computer and select the necessary features for each of the sport profiles to suit your training. For more information, see Settings (page 29).

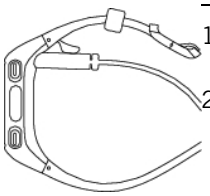
Fitness Test

To train right and to monitor your progress, it is important to know your current fitness level. The Polar Fitness Test is an easy and quick way to measure your cardiovascular fitness and aerobic capacity. The test is performed at rest. The test result is a value called OwnIndex. OwnIndex is comparable to maximal oxygen uptake (VO_{2max}), which is a commonly used aerobic capacity measure. For more information, see Polar Fitness Test (page 35).

3. TRAINING COMPUTER BATTERY

Charging Your Training Computer

The Polar RC3 GPS training computer has an internal, rechargable battery. Use the USB cable included in the product set to charge the training computer via the USB connector on your computer. If you want to plug the USB connector to a wall outlet, use a USB power adapter (not included in the product set).



1. Plug the micro USB connector into the USB port of the training computer.
2. Plug the USB connector into the computer USB port. It is recommended not to use USB hubs because a USB hub may not supply enough power for the training computer.

   Use a USB 2.0 compliant USB A-to-micro B cable included in the set package. If you charge from a USB hub, for example, the charging time might be prolonged.
   If you use an AC adapter, make sure that the adapter is marked with "output 5Vdc 0.5A - 2A max". Only use an AC adapter which is adequately safety approved (marked with "LPS", "Limited Power Supply" or "UL listed").

3. The charging animation appears on the display.
   When you plug in the training computer for the first time, Windows searches for drivers automatically. Wait for the driver search to complete (it takes about one minute). Alternatively you can skip the search. The charging animation / data transfer is disabled during the search.
   The battery will be 70-80% full after one hour of charging (if the battery was low). Charging the battery fully takes up to one hour and a half.
4. When the training computer is fully charged, **Charging complete** is displayed. Disconnect the cable.

When you plug the micro USB connector into the USB port of the training computer, be careful not to scratch the sealing surfaces of the back case. If sealing surface has deep scratches, it will cause loss of IPx7 grade waterproof level.

After each time of using the USB port of the training computer, check visually that there is no hair, dust or other dirt on the sealing surface area of the lid/back case. Gently wipe to remove any dirt. Do not use any sharp tools or equipment for cleaning, which could cause which can cause scratches to the plastic parts.

Battery operating time

In continuous use	When recording a training session on average 1h/day, 7 days/week	When only time view is used
with the GPS function ON: up to 12 hours	with the GPS function ON: 11 days	4 months
with the GPS function OFF: up to 1700 hours	with the GPS function OFF: 120 days	

Battery operating time depends on many factors, such as the temperature of the environment in which you

use your training computer, the features you select and use, and battery aging. The operating time is significantly reduced in temperatures well below freezing. Wearing the training computer under your overcoat helps to keep it warmer and to increase the operating time.

You can increase the battery operating time significantly by using Available Accessories (page 6) instead of the GPS function for measuring speed and distance when you do not need route information.

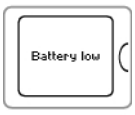
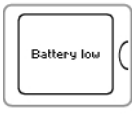
Battery Status Indication

The battery icon in the upper right hand corner of the display shows the battery charging status and approximately how much charge is left in the battery.

Battery icon	Charge left
	80 - 100%
	60 - 80%
	40 - 60%
	20 - 40%
	8 - 20%
	The training computer has enough charge for one hour of training with the GPS function on.
	The remaining charge in the battery icon is blinking. The training computer charge is too low for recording a new training session with the GPS function on. At this point, the training computer switches the GPS function off. The training computer sounds and backlight are also automatically deactivated. A new training recording cannot be started before charging the training computer.

Low battery notifications

When the charge is getting low, the training computer notifies you with a message and an alarm.

Low battery notification	Battery status
	**Battery low** This notification is displayed when the training computer has enough charge for one hour of training with the GPS function on.
 	**Battery low**, **GPS off** This notification is only displayed in training mode. The training computer charge is too low for continuing the recording of the training session with the GPS function on. At this point, the training computer switches the GPS function off. You can still use Available Accessories (page 6) and carry out the training session. The training computer sounds and backlight are automatically deactivated. A new training recording cannot be started before charging the training computer.

Low battery notification	Battery status
	Charge before training The charge is too low for recording a training session. A new training recording cannot be started before charging the training computer.
	Recording stopped, **Battery Empty** The charge is critically low. The training computer stops recording the training session, saves the training data and then goes to sleep mode.
	When the training computer display is blank, the battery is empty and the training computer has gone to sleep mode. Charge the training computer. If the battery is totally drained, it may take a while for the charging animation to appear on the display.

4. SETTING UP THE TRAINING COMPUTER

Basic Settings

Before using your training computer for the first time, customize the basic settings. Enter as accurate data as possible to ensure correct feedback based on your performance.

Activate your training computer by pressing START. **Select language** is displayed. You can select from

Dansk, **Deutsch**, **English**, **Español**, **Français**, **Italiano**, **Nederlands**, **Norsk**, **Português**, **Suomi** or **Svenska** and accept with START. **Please enter basic settings** is displayed. Press START and adjust the following data:

1. **Time**: Select **12h** or **24h**. With **12h**, select **AM** or **PM**. Enter the local time.
2. **Date**: Enter current date.
3. **Units**: Select metric **(kg/cm)** or imperial **(lb/ft)** units.
4. **Weight**: Enter your weight.
5. **Height**: Enter your height. In LB/FT format, first enter feet then inches.
6. **Date of birth**: Enter your date of birth.
7. **Sex**: Select **Male** or **Female**.
8. **Settings OK?** is displayed. To change your settings, press BACK until you return to the desired setting. To accept the settings, press START and the training computer goes to the time mode.

It is important that you are precise with the Basic Settings, especially when setting your weight, height, date of birth and sex, as they have an impact on the accuracy of the measuring values, such as the heart rate limits and calorie expenditure.

Sport Profile Settings

The **Sport Profile** feature helps you start your training session with ease. The training computer provides five sport profiles; one for running, two for cycling and two for other sports.

Adjust the settings for the sport profiles to suit your training needs in **MENU** > **Settings** > **Sport Profiles**. You can, for example, activate the sensors you want to use in the sport. Then when you start a training session using the sport profile, the training computer detects the needed sensors automatically.

The heart rate sensor is on by default in every sport. Due to this, the training computer will automatically start searching for the heart rate sensor signal once you press START in time view. If you bought a set which does not include a heart rate sensor, turn it off in **MENU** > **Settings** > **Sport Profiles** > **Sport** > **Heart rate sensor** > **Off**.

For more information on the sport profile settings, see Sport Profile Settings (page 29).

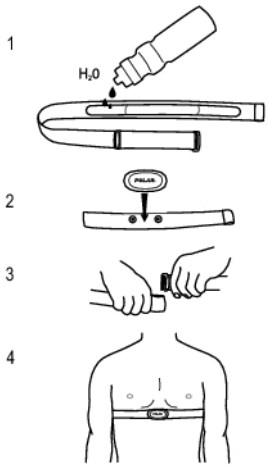
When you activate an optional sensor (s3+ stride sensor, CS speed sensor W.I.N.D. or CS cadence sensor W.I.N.D.) for the first time, it needs to be paired with the training computer. For more information on pairing a sensor with the training computer, see New Accessory (page 38).

5. TRAINING

Wearing the Heart Rate Sensor

Wear the heart rate sensor to measure heart rate.

1. Moisten the electrode area of the strap.
2. Attach the connector to the strap.
3. Tie the strap around your chest, just below the chest muscles, and attach the hook to the other end of the strap.
4. Adjust the strap length to fit tightly but comfortably. Check that the moist electrode areas are firmly against your skin and that the Polar logo of the connector is in a central and upright position.



Detach the connector from the strap after every use, to maximize the battery lifetime. Sweat and moisture may keep the electrodes wet and the heart rate sensor activated. This will reduce the battery life. For more detailed washing instructions, see Important Information (page ?).

For video tutorials, go to http://www.polar.com/en/polar_community/videos.

Starting a Training Session

Wear the heart rate sensor and make sure you have set up an optional sensor* as instructed in the sensor's user manual. If you are using a speed, cadence, or stride sensor for the first time, see New Accessory (page 38). To use Polar ZoneOptimizer feature for your training session, see Train with Polar ZoneOptimizer (page 16).

1. Start by pressing START

1. In time view, press START to enter the pre-training mode.

2. Pair the heart rate sensor with the training computer (pairing is performed only once)

Pairing ensures that your training computer receives signal from your heart rate sensor only and enables interference-free training when there are other training computers around.

If you purchased a set which does not include a heart rate sensor, and you have set the heart rate sensor off in the Sport Profile settings, skip step two and go straight to step three.

2. Pair the heart rate sensor with the training computer (pairing is performed only once)

1. **Searching for new heart rate sensor** is displayed. The training computer searches for the heart rate sensor signal.

2. **Heart rate sensor found** is displayed when the training computer finds the signal.
   If the training computer cannot find the heart rate sensor, make sure the heart rate sensor strap has not loosened and the electrodes of the heart rate sensor are wet.

3. Select the sport profile

1. Select the sport profile you want to use by browsing with UP/DOWN.

2. To change the sport profile settings or heart rate settings before the training recording is started (in pre-training mode), press and hold LIGHT to enter **QUICK MENU**. To return to the pretraining mode, press BACK.
   For sport profile settings, see Sport Profile Settings (page 29).

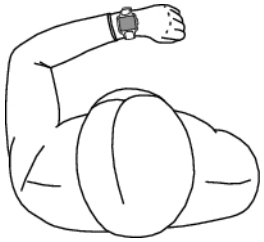
4. The training computer searches the GPS satellite signals / sensor signals

1. If you have activated the GPS function and/or an optional sensor* in this sport profile, the training computer will automatically start searching for the signals.

   Stay in the pre-training mode until the training computer has found the signals.

4. The training computer searches the GPS satellite signals / sensor signals

2. To catch the GPS satellite signals, go outdoors and away from tall buildings and trees.
   Wear the training computer with the face upwards on your wrist. Keep the training computer in a horizontal position in front of you and away from your chest (see the image below). Keep your arm stationary and raised above the level of your chest during the search.



Do not move your arm during the search. Keep still!

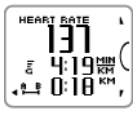
   Stand still and hold the position until the training computer has found the satellite signals (an alarm sounds and a check mark appears on the arm of the figure once the signal is found).
   In good conditions, finding the satellite signals for the first time typically takes 30-60 seconds.

3. The check mark indicates that the signal is found. In this image, the training computer has found the heart rate sensor signal and the GPS signal. The training computer determines your location and marks the location as your starting point.

The Back to Starting Point (page 22) feature requires accurate starting point information in order to function properly.

   If the training computer does not find a sensor signal, the display shows a triangle with an exclamation mark.

5. Start recording the training session



1. Once the training computer has found all the signals, press START. **Recording started** is displayed and you can start training.
   During training recording you can change the training view by browsing with UP/DOWN. To change settings without stopping the training recording, press and hold LIGHT to enter QUICK MENU. For more information, see Quick Menu (page 33).

Before you start recording a training session, make sure that the training computer has found the GPS satellites signals / sensor signals. This ensures that

- *you get the speed/pace and distance data from the beginning of the training session.*
- *the training computer has defined your starting point (only if you have set the GPS function on). The Back to Starting Point (page 22) feature requires accurate starting point information in order to function properly.*

*Optional sensors include Polar s3+ stride sensor, Polar CS speed sensor W.I.N.D. or Polar CS cadence sensor W.I.N.D.

Train with Polar ZoneOptimizer

The ZoneOptimizer function determines your personalized sport zones (heart rate zones) for your aerobic training session. It measures your heart rate variability during the warm-up and determines your personal sport zones. For more information, see Polar ZoneOptimizer (page 43).

To use the ZoneOptimizer function in your training, set in on by selecting **MENU** > **Settings** > **Heart rate settings** > **ZoneOptimizer** > **On** .

The ZoneOptimizer function defines the personalized target heart rate zones for you in the beginning of every training session. If there is less than an hour since your last ZoneOptimizer definition, the given target heart rate zones are not necessarily valid, because you may have not recovered from previous training, and during instant recovery, heart rate variability returns to normal state slower than heart rate.

Start Training Session with Polar ZoneOptimizer

Before ZoneOptimizer determination, make sure that you have the Polar default sport zone heart rate limits in use i.e. you have not modified the heart rate limits manually. If you want to modify the Sport Zone heart rate limits manually, set the ZoneOptimizer function off.

To set the ZoneOptimizer function on, select **MENU** > **Settings** > **Heart rate settings** > **ZoneOptimizer** > **On**.

The ZoneOptimizer determination will start in the background already when you are in pre-training mode. When you see the ECG-curve on the top right hand corner on the display, you will know that the heart rate measurement and ZoneOptimizer are on.

1. To start the training session with ZoneOptimizer press OK.
   The display will show the sport used in the previous training session and the count down timer will start running in the background as soon as the heart rate has reached 70 beats per minute. An ECG-curve will appear in the top right had corner of the display.
   Select the sport profile you want to use for your training session with UP/DOWN and press OK to start training.

2. **Keep your heart rate between 70 and 100 beats per minute for two minutes.**
   This can be achieved by standing or with very light training intensity, for example, walking slowly.
   The alarm will sound, when the first part of the determination is finished.

3. The second part of the determination will start when your heart rate has risen above 100 beats per minute.
   Continue training at light intensity. Increase heart rate gradually, and keep it between 100 – 130 bpm for two minutes.
   This can be achieved, for example, by walking briskly, or by cycling/jogging at low intensity during warm up.

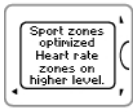
If you have a very low HR_{max}, the training computer will give you special limits.
The alarm will sound when the second part of the ZoneOptimizer determination is finished.

The ZoneOptimizer determination may already finish here, if the heart rate variation limit is reached .

4. The third part of the determination will start when your heart rate has risen above 130 beats per minute.
   Gradually increase your heart rate above 130 bpm and keep it there.

   The ZoneOptimizer determination will be finalized when the heart rate has been above 130 beats per minute for more than half a minute.

   The alarm will sound, when the third and final part of the determination is finished.



5. **After the determination is finished, the training computer displays one of the following:**

- **Default sport zones (heart rate zones) in use.** The determination was not successful. The Polar sport zone (heart rate) limits will be used.
- **Sport zones optimized. Heart rate zones on higher level.** The limits have been raised compared to your average ZoneOptimizer limits.
- **Sport zones optimized. Heart rate zones on normal level.** The limits have been raised or lowered only slightly compared to your average ZoneOptimizer limits.
- **Sport zones optimized. Heart rate zones on lower level.** The limits have been lowered compared to your average ZoneOptimizer limits.

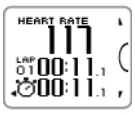
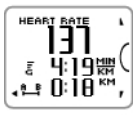
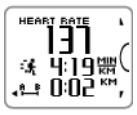
6. **After you have received and read the feedback, press any button, except LIGHT, to exit the message display and continue your training session.**

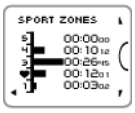
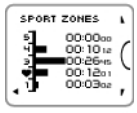
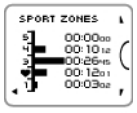
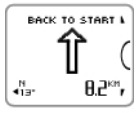
Training Views

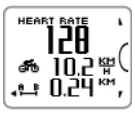
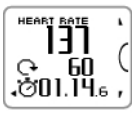
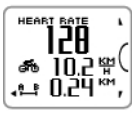
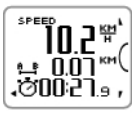
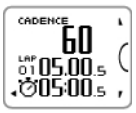
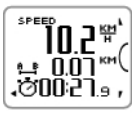
You can view different training views by pressing UP or DOWN. The number of the training view appears for a few seconds.

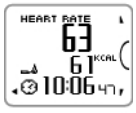
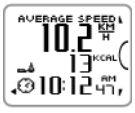
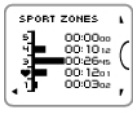
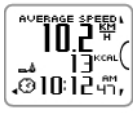
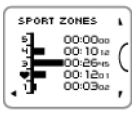
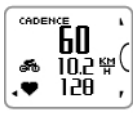
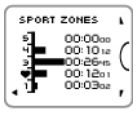
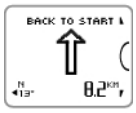
The information displayed varies depending on the sensors you have installed, which features are set on and what kind of sport you are performing.

The below tables present available training views for some different sensor combinations. In these examples, the training information is shown on three rows. You can set the training information to be shown on two or three rows in **MENU** > **Settings** > **Sport profiles** > **Sport** > **Training view**.

Heart rate sensor		**Heart rate sensor** **GPS function on**		**Heart rate sensor** **s3+ stride sensor**	
	**HEART RATE** Heart rate Lap time Duration		**HEART RATE** Heart rate Speed/Pace Distance		**HEART RATE** Heart rate Speed/Pace Distance
	ZONEPOINTER ZonePointer Time in Zone Duration		**SPEED/PACE** Speed/Pace Distance Duration		**SPEED/PACE** Speed/Pace Distance Duration

Heart rate sensor		Heart rate sensor GPS function on		Heart rate sensor s3+ stride sensor	
	CALORIES Calories Time of day Duration		**ZONEPOINTER** ZonePointer Time in Zone Duration		**ZONEPOINTER** ZonePointer Time in Zone Duration
	**SPORT ZONES** Time in each zone		**LAP 01 TIME** Lap time Heart rate Lap distance		**LAP 01 TIME** Lap time Heart rate Lap distance
			AVERAGE SPEED/PACE Average Speed/Pace Calories Time of day		**AVERAGE SPEED/PACE** Average Speed/Pace Calories Time of day
			**SPORT ZONES** Time in each zone		**SPORT ZONES** Time on each zone
			**BACK TO START** An arrow points the direction of your starting point. For more information, see Back to Starting Point (page 22)		

Heart rate sensor CS speed sensor W.I.N.D.		Heart rate sensor CS cadence sensor W.I.N.D.		Heart rate sensor CS cadence sensor W.I.N.D. GPS function on	
	**HEART RATE** Heart rate Speed/Pace Distance		**HEART RATE** Heart rate Cadence Duration		**HEART RATE** Heart rate Speed/Pace Distance
	**SPEED/PACE** Speed/Pace Distance Duration		**CADENCE** Cadence Lap time Duration		**SPEED/PACE** Speed/Pace Distance Duration

Heart rate sensor CS speed sensor W.I.N.D.		Heart rate sensor CS cadence sensor W.I.N.D.		Heart rate sensor CS cadence sensor W.I.N.D. GPS function on	
	ZONEPOINTER ZonePointer Time in Zone Duration		**ZONEPOINTER** ZonePointer Time in Zone Duration		**ZONEPOINTER** ZonePointer Time in Zone Duration
	LAP 01 TIME Lap time Heart rate Lap distance		**HEART RATE** Heart rate Calories Time of day		**LAP 01 TIME** Lap time Heart rate Lap distance
	**AVERAGE SPEED/PACE** Average speed/pace Calories Time of day		**SPORT ZONES** Time in each zone		**AVERAGE SPEED/PACE** Average speed/pace Calories Time of day
	**SPORT ZONES** Time in each zone				**CADENCE** Cadence Speed/Pace Heart rate
					**SPORT ZONES** Time on each zone
					**BACK TO START** An arrow points the direction of your starting point. For more information, see Back to Starting Point (page 22)

Symbols on the display / Explanation

Cadence

Speed at which you turn the cranks of your bicycle

Symbols on the display / Explanation

Calories

The expended calories so far. The cumulation of calories starts when your heart rate is displayed.

Distance

Cumulative distance

Duration

Total duration of the training session so far

Heart rate

Your current heart rate

Lap distance

Manual lap distance

Lap time

Manual lap number and lap time

Speed/Pace

Current pace (min/km or min/mi) or current speed (km/h or mph)

This symbol is displayed when the GPS function is on. The amount of bars above the letter G indicates the GPS signal strength.

This symbol is displayed when the s3+ stride sensor is in use.

This symbol is displayed when the CS speed sensor W.I.N.D. is in use.

You can select the speed view in sport profile settings. See Sport Profile Settings (page 12) for instructions.

Symbols on the display / Explanation

ZonePointer

Target zone indicator with a heart symbol that moves left or right on the sport zone scale according to your heart rate.

Time in Zone

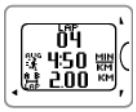
Time spent in the target zone

Time of day

Button Functions During Training

Record a Lap

Press START to record a lap. The display will show:
Lap number
Average heart rate of the lap
Lap time



If a speed sensor is activated, the following will also appear:
Lap number
Average speed/pace of the lap
Lap distance

Lock a Sport Zone

You can lock/unlock your heart rate to the current sport zone.

To lock/unlock the sport zone, press and hold START.

If, for example, you are running with a heart rate of 130 bpm which is 75% of your maximum heart rate, and matches sport zone 3, you can press and hold START to lock your heart rate into this zone. **Sport zone3 Locked** is displayed.

An alarm sounds if you are below or above the sport zone. Unlock the sport zone by pressing and holding START again: **Sport zone3 Unlocked** is displayed.

Night Mode

There is a night mode function in the training computer. Press the LIGHT button once during pre-training mode, training recording mode or pause mode. The backlight will be activated every time you press any of the buttons.

The display will also light up if a message, for example, **Check heart rate sensor**, is displayed.

Night mode will be switched off when you finish the training recording.

View Quick Menu

Press and hold LIGHT. **QUICK MENU** is displayed. You can change certain settings without pausing the training recording. For further information, see Quick Menu (page 33).

Pause / Stop Training Recording

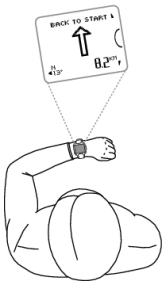
1. To pause training recording, press BACK once. To continue training recording, press START.
2. To stop recording completely, press BACK twice. The following summary of your training information is displayed
   - Textual feedback, for example **Steady state training+** , is displayed if you trained at least a total of 10 minutes in the sport zones. See the feedback in more detail in **Training Files**. For more information, see After Training (page 23)
   - **Duration** and **Calories**
   - **Average heart rate** and **Maximum heart rate**
   - **Sport zones** (Time in each zone)
   - **Average pace** and **Maximum pace** or **Average speed** and **Maximum speed** (visible if the GPS function is on or s3+ stride sensor/CS speed sensor is in use)
   - **Distance** (visible if the GPS function is on or s3+ stride sensor/CS speed sensor is in use) and **Running Index** (visible if the GPS function is on or s3+ stride sensor is in use)

Care for your heart rate sensor after training. Detach the connector from the strap and rinse the strap under running water after every use. For complete care and maintenance instructions, see Caring for Your Product (page 50).

Back to Starting Point

The **Back to starting point** feature guides your way back to the starting point. When the training computer finds the GPS satellite signals in the beginning of the training session, your location is saved as a starting point.

When it is time to return to your starting point, do the following:



- Browse to the BACK TO START-view.
- Keep the RC3 GPS in a horizontal position in front of you ("POLAR" logo facing forward).
- Keep moving in order for the RC3 GPS to determine which direction you are going. An arrow will point in the direction of your starting point.
- To get back to the starting point, always turn in the direction of the arrow.
- The RC3 GPS also shows direction coordinates and the direct distance (beeline) between you and the starting point.

When you reach the starting point, **Starting point reached** is displayed.

Always keep a map at hand in case the RC3 GPS loses the satellite signal or the battery runs out.

This feature uses the GPS function. Set GPS function on in Sport Profile Settings (page 29).

6. AFTER TRAINING

Training Benefit

The **Training Benefit** feature helps you better understand the effectiveness of your training. This feature requires the use of the heart rate sensor. After each training session you get textual feedback on your performance providing that you have trained at least a total of 10 minutes in the sport zones. The feedback is based on training time distribution on sport zones, calorie expenditure and duration. In **Training Files** you get the feedback in more detail. The descriptions of different training benefit options are listed in the table below.

Transfer your training data to the www.polarpersonaltrainer.com web service to see the benefits of the training with more physiological approach.

Feedback	Training benefit
Maximum training+	That was a hard session! You improved your sprint speed and the nervous system of your muscles, which make you more efficient. This session also increased your resistance to fatigue.
Maximum training	That was a hard session! You improved your sprint speed and the nervous system of your muscles, which make you more efficient.
Maximum & Tempo training	What a session! You improved your speed and efficiency. This session also significantly developed your aerobic fitness and your ability to sustain high intensity effort for longer.
Tempo & Maximum training	What a session! You significantly improved your aerobic fitness and your ability to sustain high intensity effort for longer. This session also developed your speed and efficiency.
Tempo training+	Great pace in a long session! You improved your aerobic fitness, speed, and ability to sustain high intensity effort for longer. This session also increased your resistance to fatigue.
Tempo training	Great pace! You improved your aerobic fitness, speed, and ability to sustain high intensity effort for longer.
Tempo & Steady state training	Good pace! You improved your ability to sustain high intensity effort for longer. This session also developed your aerobic fitness and the endurance of your muscles.
Steady state & Tempo training	Good pace! You improved your aerobic fitness and the endurance of your muscles. This session also developed your ability to sustain high intensity effort for longer.
Steady state training+	Excellent! This long session improved the endurance of your muscles and your aerobic fitness. It also increased your resistance to fatigue.
Steady state training	Excellent! You improved the endurance of your muscles and your aerobic fitness.
Steady state & Basic training, long	Excellent! This long session improved the endurance of your muscles and your aerobic fitness. It also developed your basic endurance and your body's ability to burn fat during exercise.

Feedback	Training benefit
Steady state & Basic training	Excellent! You improved the endurance of your muscles and your aerobic fitness. This session also developed your basic endurance and your body's ability to burn fat during exercise.
Basic & Steady state training, long	Great! This long session improved your basic endurance and your body's ability to burn fat during exercise. It also developed the endurance of your muscles and your aerobic fitness.
Basic & Steady state training	Great! You improved your basic endurance and your body's ability to burn fat during exercise. This session also developed the endurance of your muscles and your aerobic fitness.
Basic training, long	Great! This long, low intensity session improved your basic endurance and your body's ability to burn fat during exercise.
Basic training	Well done! This low intensity session improved your basic endurance and your body's ability to burn fat during exercise.
Recovery training	Very nice session for your recovery. Light exercise like this allows your body to adapt to your training.

Training Files

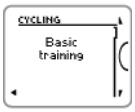
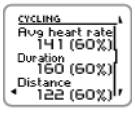
The training computer records your training data in **Training files** when the training session has lasted at least one minute.

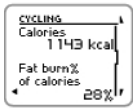
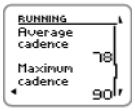
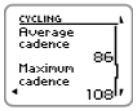
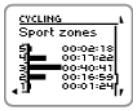
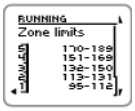
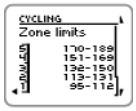
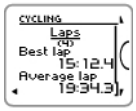
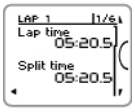
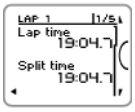
To view basic data on your performance, see **MENU** > **Data** > **Training files**.

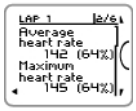
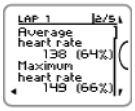
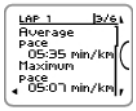
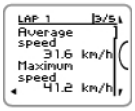
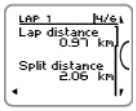
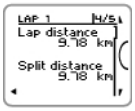
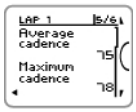
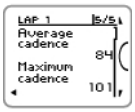
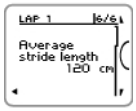
For deeper analysis, transfer the data to polarpersonaltrainer.com with the USB cable and WebSync software. The web service offers various options to analyze the data with.

In **Training files**, browse with UP / DOWN buttons to select the file you want to review and press START.

The information stored in a training file depends on the sport profile and the sensors in use. The below table presents examples of training file views for running and cycling sports.

TRAINING FILE VIEWS		INFORMATION DISPLAYED
		Textual feedback on your performance, for example **Steady state training+**, is displayed if you trained at least a total of 10 minutes in the sport zones. To view the training benefit, select **More details** by pressing START.
		Start time **Duration** **Distance** (visible if the GPS function is on or s3+ stride sensor/CS speed sensor is in use)
		**Avg heart rate** **Max heart rate** **Min heart rate** (visible if the heart rate sensor is in use)

TRAINING FILE VIEWS		INFORMATION DISPLAYED
		**Calories** **Fat burn% of calories** (visible if heart rate sensor in use)
		Average pace / **Average speed** **Maximum pace** / **Maximum speed** (visible if the GPS function is on or s3+ stride sensor/CS speed sensor is in use)
		**Average cadence** **Maximum cadence** (visible if s3+ stride sensor or CS cadence sensor is in use)
		Running index (visible if the GPS function is on or s3+ stride sensor is in use)
		Average stride length (visible if s3+ stride sensor is in use) **Running index** (visible if the GPS function is on or s3+ stride sensor is in use)
		Bike in use **Riding duration** (visible if training file sport is cycling)
		**Sport zones** Time on each zone (visible if heart rate sensor is in use)
		**Zone limits** (visible if ZoneOptimizer used and heart rate sensor is in use)
		**Laps/Automatic laps** (number of the laps) **Best lap** **Average lap**
		To view detailed lap information, select **More details** by pressing START.
	 	The following information on **LAP 1**/ **A. LAP 1** is displayed: **Lap time** **Split time**
		You can browse the laps with UP or DOWN. To browse the following information on a certain lap, press START.

TRAINING FILE VIEWS	INFORMATION DISPLAYED		
			**Average heart rate** **Maximum heart rate**
			**Average pace** / **Average speed** **Maximum pace** / **Maximum speed** (visible if the GPS function is on or s3+ stride sensor/CS speed sensor is in use)
			**Lap distance** **Split distance** (visible if the GPS function is on or s3+ stride sensor/CS speed sensor is in use)
			**Average cadence** **Maximum cadence** (visible if s3+ stride sensor or CS cadence sensor is in use)
			**Average stride length** (visible if s3+ stride sensor is in use)

Delete Files

The training file memory becomes full once either the maximum recording time or the maximum number of files is reached. For more information on the limit values, see Technical Specifications (page 53).

When the training file memory becomes full, the oldest training file is overwritten by the most recent one. To save the training file for a longer period of time, transfer it to the Polar web service at www.polarpersonaltrainer.com. For more information, see polarpersonaltrainer.com (page 28).

To delete a training file:

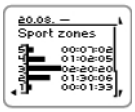
1. Select **MENU** > **DATA** > **Delete files** > **Training file** and press START. Browse the files with the UP/DOWN buttons and select the file you want to delete. Press START **Delete file? YES/NO** is displayed. Alternatively, you can delete a file in **MENU** > **Data** > **Training files**. Browse with UP/DOWN to the file you want to delete, then press and hold LIGHT. **Delete file? YES/NO** is displayed
2. Select **YES**, **File deleted** is displayed. After that **Remove file from totals?** is displayed. If you select **YES**, **File deleted from totals** is displayed. If you select **NO**, the training computer returns to the training file menu. Note! Deleting a file from totals does not delete data from **Week summaries**. **Week summaries** can be only reset

To delete all files:

1. Select **MENU** > **DATA** > **Delete files** > **All files** and press START. **Delete all files? YES/NO** is displayed.
2. Select **YES** and **All files deleted** is displayed. If you select **NO** the training computer returns to the training all files menu.

Week Summaries

To view week summaries of the training files go to **MENU** > **Data** > **Week summaries** > **Summary** and press START.

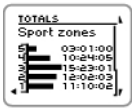
	SUMMARY This week The dates on which the data was collected Duration
	Duration Distance
	Calories Number of sessions
	Sport zones 1, 2, 3, 4 and 5 Time per zone

Reset Week Summaries

To reset weeks summaries select **MENU** > **DATA** > **Reset week summaries?**. Select **Yes** and **Week summaries reset** is displayed or **No** and the training computer returns to Data menu.

Totals Since xx.xx.xxxx

To view totals of the training files go to **MENU** > **Data** > **Totals since** and press START.

	Duration Distance
	Calories Number of sessions
	Sport zones 1, 2, 3, 4 and 5 Time per zone

Reset Totals

To reset totals select **MENU** > **DATA** > **Reset totals?** Select **Yes** and **Totals reset** is displayed or **No** and the training computer returns to Data menu.

7. POLARPERSONALTRAINER.COM

Analyze Your Training Data

For a long-term follow-up, store your training files in the polarpersonaltrainer.com web service. There you can view detailed information on your training sessions and get a better understanding of your training. With the USB cable and Polar WebSync software, it is easy to transfer training files to the polarpersonaltrainer.com web service.

Use the USB cable included in the set package for data transfer. If you use another USB cable, make sure that it is a USB 2.0 compliant USB A-to-micro B cable.

How to set up your computer for data transmission

1. Register at polarpersonaltrainer.com
2. Download and install WebSync software on your computer at polarpersonaltrainer.com.
3. Plug the micro USB connector into the USB port in the training computer and the USB connector into the computer USB port.
4. WebSync software starts automatically and the welcome window opens (you can also double-click the WebSync icon on your task bar/menu bar to start Websync).
   If you want to transfer training data, select **Synchronize**. If you want to connect to your training computer to modify settings and to transfer them to the training computer, select **Training Computer** .

For more information on transfering data and modifying training computer settings, see WebSync Help [https://www.polarpersonaltrainer.com/help/websync2/en/Polar_WebSync_2.x_Help_EN.htm].

Utilize Polar Endurance Training Programs

Utilize the ready-made Polar Endurance Program for running or cycling, or create your own phased training sessions in polarpersonaltrainer.com. Transfer them to the training computer by using the USB cable and WebSync software. For more information, see polarpersonaltrainer.com Help [https://www.polarpersonaltrainer.com/help/en/index.html].

Once you have transferred the program onto to your training computer, go to **MENU** > **PROGRAM** and press START. You can browse through the planned training sessions with UP/DOWN buttons and select the training session you want to do (for example Thu 26.8.Long run 20km). To start training press START.

For more information on Endurance programs, see Polar Endurance Training Program for Running and Cycling (page 48).

8. SETTINGS

Sport Profile Settings

Adjust the settings for the sport profiles to suit your training needs in **MENU** > **Settings** > **Sport Profiles**. You can, for example, activate the sensors you want to use in different sports. When you start a training session using the sport profile, the training computer detects the needed sensors automatically.

There are four sport profiles shown in the pre-training mode by default: **Running**, **Cycling (Bike 1)**, **Other sport 1** and **Other sport 2**. The fifth sport profile, **Cycling (Bike 2)**, is not show in the pre-training mode by default. You can set **Cycling (Bike 2)** to be shown in the pre-training mode in Cycling Settings.

The heart rate sensor is on by default in every sport, and the training computer automatically starts searching for the heart rate sensor signal once you press START in time mode. If you bought a set which does not include a heart rate sensor, turn it off in **MENU** > **Settings** > **Sport Profiles** > **Sport** > **Heart rate sensor** > **Off**.

Running Settings

To view or modify sport profile settings for running, select **MENU** > **Settings** > **Sport profiles** > **Running**

- **Training sounds**: Select **Off**, **Soft**, **Loud** or **Very loud**.
- **Heart rate sensor**: Select **On**, **Off** or **Search new**.
- **GPS**: Select **On** or **Off**.
- **Stride sensor**: Select **Off** or **Search new**. If you have already paired one stride sensor, the option **On** is also visible.
- **Stride sensor calibration**: Select **Calibrate** > **By running** or **Set factor**. For more information on calibration, see Calibrate the Polar s3+ Stride Sensor (page 39).

  Stride sensor calibration is visible only if the stride sensor has been set on previously.

- **Speed View**: Select **Kilometers per hour** or **Minutes per kilometer**. If you have chosen imperial unit, select **Miles per hour** or **Minutes per mile**.
- **Automatic lap**: Select **On** or **Off**. If you set the automatic lap **On**, **Set automatic lap distance** is displayed. Set the distance in kilometers or miles.
- **Show in pre-training mode?** Select **YES**, and **Sport shown in pre-training mode** is displayed. When you press START in time mode, the sport will be visible in the list of sports in pre-training mode. Select **No** and **Sport not shown in pre-training mode** is displayed.
- **Training view numbering**: Select **On** or **Off**. If you set the **Training view numbering On**, the number of the training view appears for a few seconds when you browse the training views with UP/DOWN.
- **Training view**: Select **3 rows** or **2 rows**. The training information will be displayed on three or two rows according to your selection.

All new sensors must be paired with the training computer before they can be activated.

For more information on pairing a new sensor with the training computer, see New Accessory (page 38).

Cycling Settings

To view or modify sport profile settings for cycling, select **MENU** > **Settings** > **Sport profiles** > **Cycling (Bike1)/Cycling2 (Bike 2)**

- **Training sounds**: Select **Off**, **Soft**, **Loud** or **Very loud**.
- **Heart rate sensor**: Select **On**, **Off** or **Search new**.
- **GPS**: Select **On** or **Off**.
- **Bike 1 settings** For more information, see Bike Settings.
- **Speed View**: Select **Kilometers per hour** or **Minutes per kilometer**. If you have chosen imperial unit,

select **Miles per hour** or **Minutes per mile**.

- **Automatic lap** is set off as default. Press START and **Set distance** is displayed. Set the distance in kilometers or in miles and confirm with START. **Automatic lap set to x.x km** is displayed. After this, you can select to have the Automatic lap **Off** or **On**.
- **Show in pre-training mode?** Select **YES**, and **Sport shown in pre-training mode** is displayed. When you press START in time mode, the sport will be visible in the list of sports in pre-training mode. Select **No** and **Sport not shown in pre-training mode** is displayed.
- **Training view numbering**: Select **On** or **Off**. If you set the **Training view numbering On**, the number of the training view appears for a few seconds when you browse the training views with UP/DOWN.
- **Training view**: Select **3 rows** or **2 rows**. The training information will be displayed on three or two rows according to your selection.

Bike Settings

To view or modify bike settings, select **MENU** > **Settings** > **Sport profiles** > **Cycling (Bike1)/Cycling2 (Bike 2)** > **Bike 1 settings/Bike 2 settings**

- **Speed sensor**: Select **Off** or **Search new**. If you have already paired one speed sensor, the option **On** is also visible.
- **Wheel size**: Set the wheel size to xxxx mm. For more information on measuring the wheel size, see Measuring Wheel Size.
- **Cadence sensor**: Select **Off** or **Search new**. If you have already paired one cadence sensor, the option **On** is also visible.
- **Autostart**: Set **Off** or **On**. If you select **On**, **Activate speed sensor YES/NO** is displayed. Select **YES** and **Autostart on** is displayed. If you have not paired a speed sensor with your training computer, **Speed sensor for bike required** is displayed and the training computer returns to **Bike 1 settings/Bike 2 settings**. If you select **NO**, **Activation canceled** is displayed.

All new sensors must be paired with the training computer before they can be activated.

For more information on pairing a new sensor to the training computer, see New Accessory (page 38).

Measuring Wheel Size

Select **MENU** > **Settings** > **Sport profiles** > **Cycling (Bike 1)/Cycling 2 (Bike 2)** > **Bike 1 settings** > **Wheel size** > **Set wheel size**

Wheel size settings are a prerequisite for correct cycling information. There are two ways of determining the wheel size of your bike:

Method 1

Look for the diameter in inches or in ETRTO printed on the wheel. Match it to the wheel size in millimeters in the right column of the chart.

ETRTO	Wheel size diameter (inches)	Wheel size setting (mm)
25-559	26 x 1.0	1884
23-571	650 x 23C	1909
35-559	26 x 1.50	1947
37-622	700 x 35C	1958
47-559	26 x 1.95	2022
20-622	700 x 20C	2051
52-559	26 x 2.0	2054
23-622	700 x 23C	2070

ETRTO	Wheel size diameter (inches)	Wheel size setting (mm)
25-622	700 x 25C	2080
28-622	700 x 28	2101
32-622	700 x 32C	2126
42-622	700 x 40C	2189
47-622	700 x 47C	2220

Wheel sizes on the chart are advisory as wheel size depends on the wheel type and air pressure.

Method 2

Measure the wheel manually for the most accurate result.

Use the valve to mark the point where the wheel touches the ground. Draw a line on the ground to mark that point. Move your bike forward on a flat surface for one complete rotation. The tire should be perpendicular to the ground. Draw another line on the ground at the valve to mark a full rotation. Measure the distance between the two lines.

Subtract 4 mm to account for your weight on the bike to get your wheel circumference. Enter this value in the training computer.

Other Sport Settings

To view or modify sport profile settings for other sport, select **MENU** > **Settings** > **Sport profiles** > **Other sport 1**/ **Other sport 2**

- **Training sounds**: Select **Off**, **Soft**, **Loud** or **Very loud**.
- **Heart rate sensor** : Select **On**, **Off** or **Search new**.
- **GPS**: Select **On** or **Off**.
- **Speed View**: Select **Kilometers per hour** or **Minutes per kilometer** . If you have chosen imperial unit, select **Miles per hour** or **Minutes per mile**
- **Automatic lap**: Set **On** or **Off**. If you set the automatic lap **On**, **Set automatic lap distance** is displayed. Set the distance in kilometers or miles.
- **Show in pre-training mode?** Select **YES**, and **Sport shown in pre-training mode** is displayed. When you press START in time mode, the sport will be visible in the list of sports in pre-training mode. Select **No** and **Sport not shown in pre-training mode** is displayed.
- **Training view numbering** : Select **On** or **Off**. If you set the **Training view numbering On** , the number of the training view appears for a few seconds when you browse the training views with UP/DOWN.
- **Training view**: Select **3 rows** or **2 rows**. The training information will be displayed on three or two rows according to your selection.

All new sensors must be paired with the training computer before they can be activated.

For more information on pairing a new sensor with the training computer, see New Accessory (page 38).

Heart Rate Settings

To view and change heart rate settings, select **MENU** > **SETTINGS** > **Heart rate settings** .

- **ZoneOptimizer**: Set **On** or **Off**.
- **Heart rate view** : Select **Beats per minute** (BPM) or **Percent of maximum** (% of maximum).
- **Heart rate zone lock** : Select **Heart rate zone lock OFF** , or lock one of the zones by selecting **Zone 1**, **Zone 2**, **Zone 3**, **Zone 4** or **Zone 5**. **Zone X locked** is displayed.
- **Sport zones**: Set zone 1, 2, 3, 4 and 5 heart rate limits. For more information on sport zones, see Polar

Sport Zones (page 42).
Before modifying the zone limits you need to set the ZoneOptimizer off. **To modify zones, first set ZoneOptimizer off** is displayed. **Set ZoneOptimizer off? YES/NO?** Select **YES**. **Zone optimizer off** is displayed. You can start modifying the zone limits.

User Information Settings

Enter accurate user information in the training computer to receive the correct feedback on your performance.

To view and modify user information settings, select **MENU** > **Settings** > **User information** > **USER INFORMAT.**. Browse the selection with UP/DOWN and accept the value with START.

- **Weight**: Set your weight in kilograms (kg) or pounds (lbs).
- **Height**: Set your height in centimeters (cm) or in feet and inches (if you chose imperial units)
- **Date of Birth**: Set your birthday. The order in which date settings are depends on which time and date format you have chosen (24h: day - month - year / 12h: month - day - year).
- **Sex**: Select **Male** or **Female**.
- **Activity level**: Select **Low (0-1 h/week)**, **Moderate (1-3 h/week)**, **High (3-5 h/week)** or **Top (5+ h/week)** Activity level is an assessment of your level of long-term physical activity. Select the alternative that best describes the overall amount and intensity of your physical activity during the past three months. Your activity level is used in calculating your energy expenditure.
  - **Top (5+ h/week)**: You participate in heavy physical exercise at least 5 times a week, or you exercise to improve performance for competitive purposes.
  - **High (3-5 h/week)**: You participate at least 3 times a week in heavy physical exercise, e.g. you run 20-50 km/12-31 miles per week or spend 3-5 hours per week in comparable physical activity.
  - **Moderate (1-3 h/week)**: You participate regularly in recreational sports, e.g. you run 5-10 km or 3-6 miles per week or spend 1-3 hours per week in comparable physical activity, or your work requires modest physical activity.
  - **Low (0-1 h/week)**: You do not participate regularly in programmed recreational sport or heavy physical activity, e.g. you walk only for pleasure or exercise hard enough to cause heavy breathing or perspiration only occasionally.
- **Maximum heart rate**: Set your maximum heart rate, if you know your laboratory measured current maximum heart rate value. Your age-predicted maximum heart rate value (220-age) is displayed as a default setting when you set this value for the first time. For more information, see Maximum Heart Rate (HR_{max}).
- **OwnIndex**(VO_{2max}): Set your OwnIndex (VO_{2max} value). For more information, see OwnIndex.

Maximum Heart Rate (HR_{max})

HR_{max} is used to estimate energy expenditure. HR_{max} is the highest number of heartbeats per minute during maximum physical exertion. HR_{max} is also useful when determining training intensity. The most accurate method for determining your individual HR_{max} is to perform a maximal exercise stress test in a laboratory.

OwnIndex®

Polar OwnIndex, the result of Polar Fitness Test (page 35), predicts your maximal oxygen uptake (VO_{2max}). OwnIndex usually ranges from 20 to 95 and is comparable to VO_{2max}, commonly used to evaluate aerobic fitness. Your long-term level of physical activity, heart rate, heart rate variability at rest, gender, age, height, and body weight all influence OwnIndex. The higher the OwnIndex value is, the better your aerobic fitness is.

General Settings

To view and change your general settings, select **MENU** > **Settings** > **General settings**.

- **Sounds**: Select **On** or **Off**
- **Button lock**: Select either **Manual lock** or **Automatic lock**

- **Units**: Select **Metric units (kg, m)** or **Imperial units (lbs, ft)**
- **Language**: Select **Dansk**, **Deutsch**, **English**, **Español**, **Français**, **Italiano**, **Nederlands**, **Norsk**,**Português**, **Suomi** or **Svenska** and accept with START.

Watch Settings

To view and change your **Watch settings** select **MENU** > **Settings** > **Watch settings**

- **Alarm**: Set alarm repetition **Off**, **Once**, **Monday to Friday** or **Every day**
- **Time**: Select **Time 1**, **Time 2** or **Time in use**
- **Date**: **Set date**, **Date format** and **Date separator**
- **Week' starting day**: Select **Monday**, **Saturday** or **Sunday**
- **Watch face**: Select **Time only**, **Time and logo** or **Time and event** (visible if you have set an event in polarpersonaltrainer.com and transfered the data to your training computer with the USB cable and WebSync software).

Quick Menu

Some settings can be modified with a shortcut button. You can enter **Quick menu** by pressing and holding LIGHT in time mode, pre-training mode or training mode. Depending on which mode you enter the Quick menu from, you will find different selections.

Time Mode

In time mode, press and hold LIGHT to enter **Quick menu**.

- Select **Lock buttons** and press START. To unlock buttons, press and hold **LIGHT** again.
- Select alarm repetition **Alarm** > **Off**, **Once**, **Monday to Friday** or **Every day**.
- Select **Time in use** > **Time 1** or **Time 2**.

Pre-training mode

To enter pre-training mode, press START in time mode. In pre-training mode, press and hold LIGHT to enter **Quick menu**.

- Edit sport profile settings. For more information, see Sport Profile Settings (page 29).
- Edit heart rate settings. For more information, see Heart Rate Settings (page 31).

Training Mode

In training mode, press and hold LIGHT to enter **Quick menu**.

- Select **Lock buttons** and press **START**. To unlock buttons, press and hold **LIGHT** again.
- Select **Search sensor** and the training computer starts searching for the sensor.

  This selection is available only if the connection to any of the sensors has been lost.

- Select **Calibrate stride sensor** to calibrate s3+ stride sensor.

  The option is only available when s3+ stride sensor is in use.

- Select **Training sounds** and set training sounds **Off**, **Soft**, **Loud** or **Very loud**
- Select **Set automatic lap off** or **On**.

  This selection is only available if speed information is available i.e. GPS function or optional CS speed sensor/s3+ stride sensor has been set on for the sport profile.

- Select **GPS info** to view the number of visible satellites.
- Select **Show zone limits** if you want to see the sport zone heart rate limits.

This selection is only available if heart rate sensor is set on.

9. POLAR FITNESS TEST

The Polar Fitness Test is an easy, safe, and quick way to measure your aerobic (cardiovascular) fitness at rest. The result, Polar OwnIndex, is comparable to maximal oxygen uptake (VO_{2max}), which is commonly used to evaluate aerobic fitness. Your long-term level of physical activity, heart rate, heart rate variability at rest, gender, age, height, and body weight all influence OwnIndex. The Polar Fitness Test is developed for use by healthy adults.

Aerobic fitness relates to how well your cardiovascular system works to transport oxygen to your body. The better your aerobic fitness, the stronger and more efficient your heart is. Good aerobic fitness has many health benefits. For example, it helps in decreasing high blood pressure and your risk of cardiovascular diseases and stroke. If you want to improve your aerobic fitness it takes, on average, six weeks of regular training to see a noticeable change in your OwnIndex. Less fit individuals see progress even more rapidly. The better your aerobic fitness, the smaller the improvements in your OwnIndex.

Aerobic fitness is best improved by training types that use large muscle groups. Such activities include running, cycling, walking, rowing, swimming, skating, and cross-country skiing.

To monitor your progress, start by measuring your OwnIndex a couple of times during the first two weeks in order to get a baseline value, and then repeat the test approximately once a month.

To make sure the test results are reliable, the following basic requirements apply:

- You can perform the test anywhere - at home, at the office, at a health club - provided the testing environment is peaceful. There should be no disturbing noises (e.g. television, radio, or telephone) and no other people talking to you.
- Always take the test in the same environment and at the same hour.
- Avoid eating a heavy meal or smoking 2-3 hours prior to testing.
- Avoid heavy physical exertion, alcohol, and pharmacological stimulants on the test day and the previous day.
- You should be relaxed and calm. Lie down and relax for 1-3 minutes before starting the test.

Before the Test

Wear the heart rate sensor

For further information, see Wearing the Heart Rate Sensor (page 13)

Enter User Information

Select **MENU** > **Settings** > **User information**

To carry out the Polar Fitness Test, enter your personal user information and long-term physical activity level in User settings.

Performing the Test

Select **MENU** > **Fitness test** > **Start test**

The test starts once the training computer detects your heart rate. The progress bar indicates that the test is ongoing. Stay relaxed and limit body movements and communication with other people.

If you have not set your long-term physical activity level in User information settings, **Set activity level of past 3 months** is displayed. Select **Top**, **High**, **Moderate** , or **Low**. For further information on activity levels, see User Information Settings (page 32).

If your training computer does not receive your heart rate at the beginning or during the test, the test fails and **Test failed**, **Check heart rate sensor** is displayed. Check that the heart rate sensor electrodes are wet and that the strap is snug enough, and start the test again.

When the test is over, you hear two beeps. OwnIndex is displayed with a numerical value and level evaluation. For further information on evaluations, see Fitness Level Classes.

Update to VO_{2max}?

- Select **Yes** to save the OwnIndex value to your user settings and **OwnIndex results** menu.
- Select **No** only if you know your laboratory-measured VO_{2max} value, and if it differs more than one fitness level class from the OwnIndex result. Your OwnIndex value is saved only to the **OwnIndex results** menu. For further information on fitness trend see OwnIndex results.

You can stop the test at any time by pressing **BACK**. **Test canceled** is displayed for a few seconds.

After saving the OwnIndex value, it will be used for calculating calorie consumption.

After the Test

Fitness Level Classes

Men

Age / Years	Very low	Low	Fair	Moderate	Good	Very good	Elite
20-24	< 32	32-37	38-43	44-50	51-56	57-62	> 62
25-29	< 31	31-35	36-42	43-48	49-53	54-59	> 59
30-34	< 29	29-34	35-40	41-45	46-51	52-56	> 56
35-39	< 28	28-32	33-38	39-43	44-48	49-54	> 54
40-44	< 26	26-31	32-35	36-41	42-46	47-51	> 51
45-49	< 25	25-29	30-34	35-39	40-43	44-48	> 48
50-54	< 24	24-27	28-32	33-36	37-41	42-46	> 46
55-59	< 22	22-26	27-30	31-34	35-39	40-43	> 43
60-65	< 21	21-24	25-28	29-32	33-36	37-40	> 40

Women

Age / Years	Very low	Low	Fair	Moderate	Good	Very good	Elite
20-24	< 27	27-31	32-36	37-41	42-46	47-51	> 51
25-29	< 26	26-30	31-35	36-40	41-44	45-49	> 49
30-34	< 25	25-29	30-33	34-37	38-42	43-46	> 46
35-39	< 24	24-27	28-31	32-35	36-40	41-44	> 44
40-44	< 22	22-25	26-29	30-33	34-37	38-41	> 41
45-49	< 21	21-23	24-27	28-31	32-35	36-38	> 38
50-54	< 19	19-22	23-25	26-29	30-32	33-36	> 36
55-59	< 18	18-20	21-23	24-27	28-30	31-33	> 33
60-65	< 16	16-18	19-21	22-24	25-27	28-30	> 30

The classification is based on a literature review of 62 studies where VO_{2max} was measured directly in

healthy adult subjects in the USA, Canada and 7 European countries. Reference: Shvartz E, Reibold RC. Aerobic fitness norms for males and females aged 6 to 75 years: a review. *Aviat Space Environ Med*; 61:3-11, 1990.

Ownindex results

Select **MENU** > **Fitness test**> **OwnIndex results**

In the **OwnIndex results** menu you can see how your OwnIndex value has been developing. Up to 60 latest OwnIndex values and respective dates are included in the display. When the latest results file becomes full, the oldest result is automatically deleted.

Delete OwnIndex Value

Select **MENU** > **Fitness test**> **OwnIndex results**

Select the value you wish to delete and press and hold LIGHT > **Delete OwnIndex (xx) value? No/Yes** is displayed. Confirm with START.

Analyzing OwnIndex Results with Software

Downloading test results to polarpersonaltrainer.com offers you the possibility of analyzing results in various ways, as well as accessing more detailed information about your progress.

10. NEW ACCESSORY

Pairing a New Sensor with the Training Computer

Before taking a new sensor into use, it has to be introduced to the training computer. This is called pairing and only takes a few seconds. Pairing ensures that your training computer receives signals from your sensor only, and enables disturbance-free training in a group.

Before entering an event or race, make sure that you do the pairing at home. This is to prevent interference due to the long-range data transmission. When pairing new sensor make sure you are not near (40 m/131 ft) other similar sensors.

Pairing a New Heart Rate Sensor with the Training Computer

If you have not paired your training computer with a heart rate sensor before, pairing is performed automatically when you start a training session. Wear the training computer and the heart rate sensor and start by pressing START. **Searching for new heart rate sensor** is displayed. The training computer searches for a heart rate sensor signal. **Heart rate sensor found** is displayed when the the training computer finds the signal.

Wear the heart rate sensor and make sure that you are not near (40 m/131 ft) other heart rate sensors.

1. Go to **Menu** > **Settings** > **Sport profiles** > **Sport** > **Heart rate sensor** > **Search new** and press START.
2. The training computer starts searching for the sensor signal, **Searching for new heart rate sensor** is displayed.
3. Once the new sensor is identified, **Heart rate sensor found** is displayed. Pairing is completed.
4. If the search is not successful, **Heart rate sensor not found** or **Other heart rate sensors interfering. Move further.**, **Try again? YES / NO** is displayed.
5. Select **YES** to start the search again.
6. Select **NO** to cancel the searching.
7. To return to time mode, press and hold the BACK button.

Only one heart rate sensor can be paired with your training computer at a time. However, the training computer remembers the last three pairings. If the most recently paired heart rate sensor is not available, but the previous is, the training computer receives the heart rate signal from the previous sensor.

Pairing a New Speed Sensor with the Training Computer

Make sure the speed sensor has been correctly installed. For more information on installing the speed sensor refer to the user manual of the speed sensor or for video tutorial at http://www.polar.com/en/polar_community/videos [http://www.polar.com/en/support/video_tutorials].

You can have two bikes on the training computer. Each bike has to have the sensors separately taught. You can only teach one speed sensor to one bike. If you have two bikes, both of them can use the same speed sensor. Or, they can have their own set of sensors. When you pair a new sensor to a bike that already has a previously taught sensor in the memory, the new sensor replaces the previous one.

1. Go to **MENU** > **Settings** > **Sport profiles** > **Cycling (Bike 1)/Cycling (Bike 2)** > **Bike 1 settings/Bike 2 settings** > **Speed sensor** > **Search new** and press START.
2. **Press OK** (START) **to start test drive** is displayed.
3. Press START and **Searching for new speed sensor** is displayed. The training computer starts searching for the speed sensor signal. Rotate the wheel a few times to activate the sensor. The flashing red light on the sensor indicates that the sensor is activated.
4. Once the new speed sensor is identified, **Speed sensor found** is displayed. Pairing is complete.
5. If the search is not successful, **Speed sensor not found** or **Other speed sensors interfering. Move further.**, **Try again? YES / NO** is displayed.
6. Select **YES** to start the search again.
7. Select **NO** to cancel the searching.

8. To return to time mode, press and hold the BACK button.

Pairing a New Cadence Sensor with the Training Computer

Make sure the cadence sensor has been correctly installed. For more information on installing the cadence sensor refer to the user manual of the cadence sensor or to the video tutorial at http://www.polar.com/en/polar_community/videos [http://www.polar.com/en/support/video_tutorials].

You can have two bikes on the training computer. Each bike has to have the sensors separately taught. You can only teach one cadence sensor to one bike. If you have two bikes, both of them can use the same cadence sensor. Or, they can have their own set of sensors. When you pair a new sensor to a bike that already has a previously taught sensor in the memory, the new sensor replaces the previous one.

1. Go to **MENU** > **Settings** > **Sport profiles** > **Cycling (Bike 1)/Cycling (Bike 2)** > **Bike 1 settings/Bike 2 settings** > **Cadence sensor** > **Search new** and press START.
2. **Press OK** (START) **to start test drive** is displayed.
3. Press START and **Searching new cadence sensor** is displayed. The training computer starts searching for the cadence sensor signal. Rotate the wheel a few times to activate the sensor. The flashing red light on the sensor indicates that the sensor is activated.
4. Once the new cadence sensor is identified, **Cadence sensor found** is displayed. Pairing is complete.
5. If the search is not successful, **Cadence sensor not found** or **Other cadence sensors interfering. Move further.**, **Try again? YES / NO** is displayed.
6. Select **YES** to start the search again.
7. Select **NO** to cancel the searching.
8. To return to time mode, press and hold the BACK button.

Pairing a New Stride Sensor with the Training Computer

Make sure the stride sensor has been correctly attached to your shoe. For more information on setting up the stride sensor refer to the user manual of the stride sensor or to the video tutorial at http://www.polar.com/en/polar_community/videos [http://www.polar.com/en/support/video_tutorials].

You can only pair one stride sensor to the training computer at a time. If you pair a new sensor, the new sensor always replaces the previous one you had paired. The stride sensor can only be paired to the Running sport profile.

1. Go to **MENU** > **Settings** > **Sport profiles** > **Running** > **Stride sensor** > **Search new** and press START.
2. **Searching for new stride sensor** is displayed. The training computer starts searching for the stride sensor signal.
3. Once the new stride sensor is identified, **Stride sensor found** is displayed. Pairing is complete.
4. If the search is not successful, **Stride sensor not found** or **Other stride sensors interfering. Move further.**, **Try again? YES / NO** is displayed.
5. Select **YES** to start the search again.
6. Select **NO** to cancel the searching.
7. To return to time mode, press and hold the BACK button.

Calibrate the Polar s3+ Stride Sensor

Polar s3+ stride sensor can be set on only for the **Running** sport profile.

Calibration of the stride sensor improves the accuracy of speed/pace and distance measurements. It is recommended that you calibrate the stride sensor before using it for the first time, if there are significant changes in your running style, or if the position of the stride sensor on the shoe is dramatically changed (e.g. if you have new shoes or if you switch the sensor from your right shoe to your left one). You can calibrate the stride sensor by running a known accurate distance, or by setting the calibration factor manually. The calibration should be done at the speed you normally run. If you run at different speeds, the calibration should be done at your average speed.

Calibration by Running Wizard

Before calibration the stride sensor needs to be paired with the training computer. For more information on pairing the stride sensor and training computer, see New Accessory (page 38).

Make sure the stride sensor function in the training computer is on. Press UP to enter **MENU** and select **Settings** > **Sport profiles** > **Running**> **Stride sensor** > **On**.

To calibrate a certain distance with a step-by-step guidance, select

1. **MENU** > **Settings** > **Sport profiles** > **Running** > **Stride sensor calibration** > **By running**. **Set distance** is displayed.
2. Adjust the distance, how far you wish to run, to calibrate the stride sensor (minimum calibration distance is 400 meters / 0.3 miles). Press START. **Stand still until stride sensor is found** is displayed.
3. **Press OK** (START) **and run xx.x km/mi** is displayed. On the starting line, press START and start your run by taking the first step with your sensor foot and run the preset distance at a steady pace.
4. **Press OK** (START) **after xx.x km/mi** is displayed. Stop exactly on the finish line of the preset distance, stand still and press START.

   Once you reach the preset distance, stop exactly on the finish line of the preset distance and stand still for calibration. If you move before **Calibrated to x.xxx** *is displayed, the calibration fails.*

5. When the calibration succeeds, **Calibrated to x.xxx** is displayed. The new calibration factor is used. **Continue recording?** is displayed. If you wish to continue the training session recording, select **Yes**. Otherwise, select **No**.
6. To cancel the calibration press BACK, **Calibration canceled** is displayed.

Set Calibration Factor Manually

The calibration factor is calculated as a ratio of the actual distance to the uncalibrated distance. Example: you run 1200m, and the training computer shows a distance of 1180m, the calibration factor is 1.000. Calculate the new calibration factor as follows: 1.000*1200/1180 = 1.017. The range of the calibration factor during manual calibration is 0.500-1.500. If you define the calibration factor below or above these values, calibration fails.

To calibrate the stride sensor manually before training, select

1. **Settings** > **Sport profiles** > **Running**> **Stride sensor** > **Set factor**.
2. Adjust the factor. **Calibareted to x.xx** is displayed.

The calibration factor can also be set during training, when the stride sensor is in use. Press and hold LIGHT to enter the **Quick menu** and then select **Calibrate stride sensor** > **Set factor** . **Calibareted to x.xx** is displayed and you can continue running.

Calibrate Sensor by Running a Known Distance (on-the-fly calibration)

Before calibration the stride sensor needs to be paired with the training computer. For more information on pairing the stride sensor and training computer, see New Accessory (page 38).

Set correct lap distance

You can calibrate the sensor at any phase of your training with lap distance correction, provided you are not training with distance-based targets. Just run a known distance, preferably more than 1000 meters / 0,62 miles.

Make sure the stride sensor function in the training computer is on. In time mode press UP to enter **MENU** and select **Settings** > **Sport profiles** > **Running**> **Stride sensor** > **On**.

1. In time mode press START and select **Running** as your sport profile. Press START again and start running.
2. At the starting point of a known lap distance, press START (minimum calibration distance is 400 meters / 0.3 miles). When you have run the whole lap distance, press START.
3. Then calibrate the sensor: Press and hold LIGHT to go enter **Quick menu**. Select **Calibrate stride sensor**.
4. Select **Set correct lap distance**. Fix the displayed lap distance with the distance you just ran, and press START. **Calibrated to x.xxx** is displayed. The sensor is now calibrated and ready for action.

Set correct distance

Alternatively, you can calibrate the stride sensor by fixing the whole distance gathered.

1. In time mode press START and select **Running** as your sport profile. Press START again and start running.
2. Press and hold LIGHT to enter the **Quick menu**. Select **Calibrate stride sensor**.
3. Select **Set correct distance**. Fix the displayed distance with the distance you just ran, and press START. **Calibrated to x.xxx** is displayed. The sensor is now calibrated and ready for action.

11. POLAR SMART COACHING

Polar Sport Zones

Polar sport zones introduce a new level of effectiveness in heart rate-based training. Training is divided into five sport zones based on percentages of maximum heart rate. With sport zones, you can easily select and monitor training intensities.

Target zone	Intensity % of HR_{max}, bpm	Example durations	Training benefit
VERY HARD	90–100% 171–190 bpm	less than 5 minutes	BENEFITS: develops maximum performance and speed FEELS LIKE: very exhausting for breathing and muscles RECOMMENDED FOR: fit persons and for athletic training
HARD	80–90% 152–172 bpm	2–10 minutes	BENEFITS: increases maximum performance capacity FEELS LIKE: muscular fatigue and heavy breathing. RECOMMENDED FOR: everybody for shorter exercises
MODERATE	70–80% 133–152 bpm	10–40 minutes	BENEFITS: improves aerobic fitness FEELS LIKE: light muscular strain, easy breathing, moderate sweating RECOMMENDED FOR: everybody for moderately long exercises
LIGHT	60–70% 114-133 bpm	40–80 minutes	BENEFITS: improves basic endurance and fat burning FEELS LIKE: comfortable, easy breathing, low muscle load, light sweating RECOMMENDED FOR: everybody for longer and frequently repeated shorter exercises
VERY LIGHT	50–60% 104–114 bpm	20–40 minutes	BENEFITS: improves overall health and helps recovery FEELS LIKE: very easy for breathing and muscles RECOMMENDED FOR: weight management and active recovery

HR_{max} = Maximum heart rate (220-age). Example: 30 years old, 220–30=190 bpm.

Training in **heart rate zone 1** is done at a very low intensity. The main training principle is that performance improves when recovering after, and not only during training. Accelerate the recovery process with very light intensity training.

Training in **heart rate zone 2** is for endurance training, an essential part of any training program. Training sessions in this zone are easy and aerobic. Long-duration training in this light zone results in effective energy expenditure. Progress will require persistence.

Aerobic power is enhanced in **heart rate zone 3**. The training intensity is higher than in sport zones 1 and 2, but still mainly aerobic. Training in sport zone 3 may, for example, consist of intervals followed by recovery. Training in this zone is especially effective for improving the efficiency of blood circulation in the heart and skeletal muscles.

If your goal is to compete at top potential, you will have to train in **heart rate zones 4** and **5**. In these zones, you exercise anaerobically in intervals of up to 10 minutes. The shorter the interval, the higher the intensity. Sufficient recovery between intervals is very important. The training pattern in zones 4 and 5 is designed to produce peak performance.

The Polar target heart rate zones can be personalized by using a laboratory measured HR_{max} value, or by taking a field test to measure the value yourself. When training in a target heart rate zone, try to make use of the entire zone. The mid-zone is a good target, but keeping your heart rate at that exact level all the time is not necessary. Heart rate gradually adjusts to training intensity. For instance, when crossing from heart rate target zone 1 to 3, the circulatory system and heart rate will adjust in 3-5 minutes.

Heart rate responds to training intensity depending on factors such as fitness and recovery levels, as well as environmental factors. It is important to look out for subjective feelings of fatigue, and to adjust your training program accordingly.

Heart Rate Variability

Heart rate varies with every heartbeat. Heart rate variability (HRV) is the variation of beat to beat intervals, also known as R-R intervals.

HRV indicates the fluctuations of heart rate around an average heart rate. An average heart rate of 60 beats per minute (bpm) does not mean that the interval between successive heartbeats would be exactly 1.0 sec, instead they may fluctuate/vary from 0.5 sec up to 2.0 sec.

HRV is affected by aerobic fitness. HRV of a well-conditioned heart is generally large at rest. Other factors that affect HRV are age, genetics, body position, time of day, and health status. During exercise, HRV decreases as heart rate and exercise intensity increase. HRV also decreases during periods of mental stress.

HRV is regulated by the autonomic nervous system. Parasympathetic activity decreases heart rate and increases HRV, whereas sympathetic activity increases heart rate and decreases HRV.

HRV is used in the OwnIndex and ZoneOptimizer features.

Polar ZoneOptimizer

The Polar ZoneOptimizer feature adjusts your sport zones based on your personal information including heart rate variability. It recommends lower intensity training when little heart rate variability is detected and higher intensity training when plenty of heart rate variability is detected. It also gives you feedback on your heart rate zones in comparison to your normal level.

Benefits of the ZoneOptimizer feature

Each Sport Zone has a different physiological response which is described briefly in the Polar Sport Zones

(page 42). The ZoneOptimizer measurement takes your personal information, including your heart rate variability, into account and personalizes your sport zones before every training session.

ZoneOptimizer measurement

Polar ZoneOptimizer recommends lower intensity training when little heart rate variability is detected and higher intensity training, when plenty of heart rate variability is detected at a given heart rate. It also gives you feedback if your current limits are higher, normal or lower than your normal level, when compared to your earlier measurements. You may get feedback on your daily physiological status by paying attention to how fast and how easily you can do training at the recommended heart rates.

Action	Heart rate in beats per minute	Duration	How to achieve
Keep your heart rate between 70 and 100 beats per minute.	70 - 100 bpm	2 minutes	Standing or training with very light training intensity, for example, walking slowly.
Increase heart rate gradually from 100 to 130 beats per minute within two minutes.	100 - 130 bpm	2 minutes	Walking briskly or cycling/ jogging at low intensity during warm up.
Gradually increase your heart rate above 130 beats per minute.	130 bpm <	At least 30 seconds	Gradually increase your heart rate and continue as planned. The ZoneOptimizer determination will finalize in one minutes time.

Measurement phases

Target zone limit determination is done in three phases.

1. **Preparing for training session and plenty of heart rate variability exists.** As there is a lot of heart rate variability, this is a very good and sensitive phase to detect daily changes. In absolute figures this means heart rates from 70 to 100 beats per minute.
2. **Warming up, heart rate rises slowly and heart rate variability drops.** During this phase heart rate variability starts dropping, and the body prepares for higher intensities. In absolute figures this means heart rates from 100 to 130 beats per minute.
3. **Heart rate variability levels off.** After this phase heart rate variability stays at a very low level or almost disappears. This usually takes place at around 130 beats per minute and higher. All Zone limits are updated after heart rate has been continuously, for at least 30 seconds, above the upper limit of Phase2 (130 beats pre minute / 75% of HR_{max}).

ZoneOptimizer guidance normally uses absolute figures (70-100-130 beats per minute), but the two uppermost figures change if personal HR_{max} is very low. The second phase upper limit, which is normally 130 beats per minute, is limited not to exceed 75% of HR_{max}. This is done automatically without actions from you.

ZoneOptimizer allows different durations of Phase1 (preparing for training session, heart rate in between 70-100 beats per minute) and Phase2 (warming up, heart rate in between 100-130 beats per minute). The recommended minimum durations to get the limits successfully determined are 2 minutes at Phase1, 2 minutes at Phase2 and half a minute or more in Phase3.

ZoneOptimizer function is developed for the use of healthy people. Some health conditions may cause heart rate variability-based ZoneOptimizer determination to fail or give lower intensity targets. These conditions include high blood pressure, cardiac arrhythmia, and certain medications.

Maximum Heart Rate

Maximum heart rate (HR_{max}) is the highest number of heartbeats per minute (bpm) during maximum physical exertion. It is individual and depends on age, hereditary factors, and fitness level. It may also vary according to the type of sport performed. HR_{max} is used to express training intensity.

Determining Maximum Heart Rate

Your HR_{max} can be determined in several ways.

- The most accurate way is to have your HR_{max} clinically measured, usually on a maximal treadmill or by taking a bicycle stress test supervised by a cardiologist or an exercise physiologist.
- You can also determine your HR_{max} by taking a field test together with a training partner.
- HR_{max} can also be estimated by using the commonly used formula: 220 - age, although research shows that this method is not very accurate, especially for older persons or those who have been fit for many years.

If you have done some hard training in recent weeks and know that you can safely reach maximum heart rate, you can safely take a test to determine your HR_{max} yourself. Having a training buddy with you during the test is recommended. If you are uncertain, consult your physician before undertaking the test.

Here is an example of a simple test.

Step 1: Warm up for 15 minutes on a flat surface, building up to your usual training pace.

Step 2: Choose a hill or stairwell that will take more than 2 minutes to climb. Run up the hill/steps once, building to as hard a pace as you can hold for 20 minutes. Return to the base of the hill/steps.

Step 3: Run up the hill/steps again, building towards a pace you could just about hold for 3 kilometers. Note your highest heart rate. Your maximum is approximately 10 beats higher than the noted value.

Step 4: Run back down the hill, allowing your heart rate to drop 30-40 beats per minute.

Step 5: Run up the hill/steps once again at a pace that you can only hold for 1 minute. Try to run halfway up the hills/steps. Note your highest heart rate. This brings you close to your maximum heart rate. Use this value as your maximum heart rate to set training zones.

Step 6: Make sure you get a good cool-down, a minimum of 10 minutes.

Running Cadence and Stride Length

Cadence* is the number of times the foot with the stride sensor* hits the ground per minute.

Stride length* is the average length of one step. That is the distance between your right and left foot contacting the ground.

Running speed = 2 * stride length * cadence

There are two ways to run faster: moving your legs at a higher cadence or taking longer steps.

Elite long distance runners typically run with a high cadence of 85-95. On uphills, typical cadence values are lower. On downhills they are higher. Runners adjust stride length to gather speed: stride length increases as speed increases.

Yet one of the most common mistakes novice runners make is over-striding. The most efficient stride length is the natural one – the one that feels most comfortable. You will run faster in races by strengthening your leg muscles so they take you forward with a longer stride.

You should also work on maximizing cadence efficiency. Cadence does not progress easily, but if properly trained, you will be able to sustain it throughout your runs and maximize your performance. To develop cadence, the nerve-muscle connection needs to be trained - and reasonably frequently. A session of cadence training a week is a good start. Incorporate some cadence work into the rest of your week. During long easy runs, you could include some faster cadence every now and then.

A good way of improving stride length is to undertake specific strength work, like running hills, running in soft sand, or running up steps. A six-week training period including strength work should result in noticeable improvements in stride length, and if combined with some faster leg speed work (such as short strides at best 5km pace), noticeable improvements should be seen in overall speed, as well.

*Optional s3+ stride sensor required.

Polar Running Index

Running Index offers an easy way to monitor performance changes. Performance (how fast/easily you run at a given pace) is directly influenced by aerobic fitness (VO_{2max}) and training economy (how efficient your body is at running), and Running Index is a measurement of this influence. By recording your Running Index over time, you can monitor progress. Improvement means that running at a given pace requires less of an effort, or that your pace is faster at a given level of exertion. The Running Index feature calculates such improvements. Running Index also gives you daily information on your running performance level which may vary from day to day.

Benefits of Running Index:

- emphasizes the positive effects of good training sessions and resting days.
- monitors fitness and performance development at different heart rate levels - not only during maximal performance.
- you can determine your optimal running speed by comparing running indexes from different kinds of training sessions.
- stresses progress through better running technique and fitness level.

Running Index is calculated during every training session when heart rate and the GPS function is on / s3+ stride sensor is in use, and when the following requirements apply:

- speed should be 6 km/h / 3,75 mi/h or faster and duration 12 minutes minimum.
- heart rate should be at least 40% of your HRR (heart rate reserve). Heart rate reserve is the difference between maximum heart rate (HR_{max}), and resting heart rate (HR_{rest})

  Example:
  A person with HR_{max}190 bpm and HR_{rest} 60 bpm
  40% (190-60) + 60 = 112 bpm (heart rate should be at least 112 bpm)

  For a precise exercise heart rate, you need your exact HR_{max} and HR_{rest}. When using estimated HRmax, exercise heart rate values are always estimates.

Make sure that the stride sensor is calibrated. Calculation begins when you start recording the session. During the session, you may stop once at traffic lights, for example, without interrupting the calculation.

In the end, your training computer displays a Running Index value and stores the result in the Training files section. Compare your result to the table below. Using the software, you can monitor and analyze your progress in Running Index values against time and different running speeds. Or compare values from different training sessions and analyze them in short and long term.

Short-term analysis

Men

Age / Years	Very low	Low	Fair	Moderate	Good	Very good	Elite
20-24	< 32	32-37	38-43	44-50	51-56	57-62	> 62
25-29	< 31	31-35	36-42	43-48	49-53	54-59	> 59
30-34	< 29	29-34	35-40	41-45	46-51	52-56	> 56
35-39	< 28	28-32	33-38	39-43	44-48	49-54	> 54

Age / Years	Very low	Low	Fair	Moderate	Good	Very good	Elite
40-44	< 26	26-31	32-35	36-41	42-46	47-51	> 51
45-49	< 25	25-29	30-34	35-39	40-43	44-48	> 48
50-54	< 24	24-27	28-32	33-36	37-41	42-46	> 46
55-59	< 22	22-26	27-30	31-34	35-39	40-43	> 43
60-65	< 21	21-24	25-28	29-32	33-36	37-40	> 40

Women

Age / Years	Very low	Low	Fair	Moderate	Good	Very good	Elite
20-24	< 27	27-31	32-36	37-41	42-46	47-51	> 51
25-29	< 26	26-30	31-35	36-40	41-44	45-49	> 49
30-34	< 25	25-29	30-33	34-37	38-42	43-46	> 46
35-39	< 24	24-27	28-31	32-35	36-40	41-44	> 44
40-44	< 22	22-25	26-29	30-33	34-37	38-41	> 41
45-49	< 21	21-23	24-27	28-31	32-35	36-38	> 38
50-54	< 19	19-22	23-25	26-29	30-32	33-36	> 36
55-59	< 18	18-20	21-23	24-27	28-30	31-33	> 33
60-65	< 16	16-18	19-21	22-24	25-27	28-30	> 30

The classification is based on a literature review of 62 studies where VO_{2max} was measured directly in healthy adult subjects in the USA, Canada and 7 European countries. Reference: Shvartz E, Reibold RC. Aerobic fitness norms for males and females aged 6 to 75 years: a review. *Aviat Space Environ Med*; 61:3-11, 1990.

There may be some daily variation in the Running Indexes due to running circumstance changes, for example different surface, hills, wind or temperature.

Long-term analysis

The single Running Index values form a trend that predicts your success in running certain distances.

The following chart estimates the duration that a runner can achieve in certain distances when performing maximally. Use your long-term Running Index average in the interpretation of the chart. **The prediction is best for those Running Index values that have been received at speed and running circumstances similar to the target performance.**

Running Index	Cooper test (m)	5 km (h:mm:ss)	10 km (h:mm:ss)	21.098 km (h:mm:ss)	42.195 km (h:mm:ss)
36	1800	0:36:20	1:15:10	2:48:00	5:43:00
38	1900	0:34:20	1:10:50	2:38:00	5:24:00
40	2000	0:32:20	1:07:00	2:29:30	5:06:00
42	2100	0:30:40	1:03:30	2:21:30	4:51:00
44	2200	0:29:10	1:00:20	2:14:30	4:37:00

Running Index	Cooper test (m)	5 km (h:mm:ss)	10 km (h:mm:ss)	21.098 km (h:mm:ss)	42.195 km (h:mm:ss)
46	2300	0:27:50	0:57:30	2:08:00	4:24:00
48	2400	0:26:30	0:55:00	2:02:00	4:12:00
50	2500	0:25:20	0:52:40	1:57:00	4:02:00
52	2600	0:24:20	0:50:30	1:52:00	3:52:00
54	2700	0:23:20	0:48:30	1:47:30	3:43:00
56	2800	0:22:30	0:46:40	1:43:30	3:35:00
58	2900	0:21:40	0:45:00	1:39:30	3:27:00
60	3000	0:20:50	0:43:20	1:36:00	3:20:00
62	3100	0:20:10	0:41:50	1:32:30	3:13:00
64	3200	0:19:30	0:40:30	1:29:30	3:07:00
66	3300	0:18:50	0:39:10	1:26:30	3:01:00
68	3350	0:18:20	0:38:00	1:24:00	2:55:00
70	3450	0:17:50	0:36:50	1:21:30	2:50:00
72	3550	0:17:10	0:35:50	1:19:00	2:45:00
74	3650	0:16:40	0:34:50	1:17:00	2:40:00
76	3750	0:16:20	0:33:50	1:14:30	2:36:00
78	3850	0:15:50	0:33:00	1:12:30	2:32:00

Polar Training Load Feature

The training load feature in the calendar view in polarpersonaltrainer.com will conveniently tell you how hard your training session was, and how much time is needed for complete recovery.This feature tells you if you have recovered enough for your next session, helping you find the balance between rest and training. In polarpersonaltrainer.com you can control your total workload, optimize your training, and monitor your performance development.

Training load takes into consideration different factors which affect your training load and recovery time, such as heart rate during training, duration of training, and your individual factors, e.g. sex, age, height, and weight. Continuous monitoring of training load and recovery will help you recognize personal limits, avoid over or under training, and adjust training intensity and duration according to your daily and weekly targets.

Training Load feature helps you to control total workload, optimize your training, and monitor your performance development. The feature makes different kinds of training sessions comparable with each other, and helps you to find the perfect balance between rest and training.

For more information on Training load, see polarpersonaltrainer.com Help.

Polar Endurance Training Program for Running and Cycling

Polar has created tailored Endurance training programs for running and cycling, which are available for you in polarpersonaltrainer.com. You get a personalized training program to best suit your current fitness level.

Endurance training programs are ideal for you, if running or cycling is incorporated in your main fitness routine. Endurance programs improve cardiovascular fitness and are not targeted to any sport event.

Endurance training programs are continual i.e. the program will continue as long as you want to stop it. The program guides you to train in the correct way by defining the training volume, training intensity and training placement on weekdays, for the optimal fitness improvement.

The training program works together with the ZoneOptimizer feature, which means that the training program sessions are modified according to your personal sport zones determined by the ZoneOptimizer. For more information, see Polar ZoneOptimizer (page 43).

Suitable Program Starting Level for Everybody

Program level must be known before a suitable training module can be selected. The determination of the program level can be done:

- automatically using your previous training history in polarpersonaltrainer.com
- or using a short questionnaire which you will have to fill in.

General programs are compiled of 4 week long training modules. Training module in level 1 is the least demanding and the module in level 20 is the most demanding. Steps between 1-20 are linear, which means that you can improve your fitness step by step (for example from level 7 to level 8 et cetera).

Training modules and your training activity are linked together so that training modules get more challenging as your training activity increases, and also less challenging if your training activity decreases.

Beginner stage consists of levels 1-5. At this stage the 4 weeks training module contains mainly medium and long training sessions; interval training sessions are given from level 5 onwards.

Moderate stage consists of levels 6-10. At this stage the 4 weeks training module contains mainly medium, long and interval training sessions; tempo training sessions are given from level 11 onwards.

Advanced stage consists of levels 11-20. At this stage the 4 weeks training module contains mainly medium, long, interval and tempo training sessions; easy training sessions are given from level 12 onwards.

For more information on Polar Endurance training programs see polarpersonaltrainer.com Help.

12. IMPORTANT INFORMATION

Caring for Your Product

Like any electronic device, the Polar training computer should be treated with care. The suggestions below will help you fulfil guarantee obligations and enjoy this product for many years to come.

Training computer

Keep your training computer clean. Use a damp paper towel to wipe dirt from the training computer. To maintain the water resistance, do not wash the training computer with a pressure washer. *Do not immerse the training computer in water*. Never use alcohol or any abrasive material such as steel wool or cleaning chemicals.

After each time of using the USB port of the training computer, check visually that there is no hair, dust or other dirt on the sealing surface area of the lid/back case. Gently wipe to remove any dirt. Do not use any sharp tools or equipment for cleaning, which could cause scratches to the plastic parts.

Not suitable for bathing or swimming. Protected against wash splashes and raindrops. Do not immerse the training computer in water. Using the training computer in excessive rainfall may cause interference on GPS reception.

Operating temperatures are -10 °C to +50 °C / +14 °F to +122 °F.

If you use the RC3 GPS unit in extreme conditions (high humidity and big temperature changes), some water might condensate inside the unit. This does not damage the unit and water will evaporate after a while. If you want to speed up the evaporation, open the USB lid to ventilate the unit. Please remember to close the USB lid properly afterwards to secure waterproofness.

Heart rate sensor

Connector: Detach the connector from the strap after every use and dry the connector with a soft towel. Clean the connector with a mild soap and water solution when needed. Never use alcohol or any abrasive material (eg. steel wool or cleaning chemicals).

Strap: Rinse the strap under running water after every use and hang to dry. Clean the strap gently with a mild soap and water solution when needed. Do not use moisturizing soaps, because they can leave residue on the strap. Do not soak, iron, dry clean or bleach the strap. Do not stretch the strap or bend the electrode areas sharply.

Check the washing instructions on the label of the strap.

CS speed sensor, CS cadence sensor and s3+ stride sensor

Clean the sensors with a mild soap and water solution and rinse them with clean water. To maintain the water resistance, do not wash the sensors with a pressure washer. *Do not immerse the CS speed sensor, CS cadence sensor or s3+ stride sensor in water*. Never use alcohol or any abrasive material such as steel wool or cleaning chemicals.

Avoid hard hits to the sensors, as these may damage the sensor units.

Storing

Keep your training computer and sensors in a cool and dry place. Do not keep them in a damp environment, in non-breathable material (a plastic bag or a sports bag) nor with conductive material (a wet towel). Do not expose the training computer to direct sunlight for extended periods, such as by leaving it in a car or mounted on the bike mount.

It is recommended to store the training computer partially or fully charged. The battery slowly loses its charge when it is stored. If you are going to store the training computer for several months, it is recommended to recharge it after a few months. This will prolong the battery lifetime.

Dry and store the strap and the connector separately to maximize the heart rate sensor battery lifetime. Keep the heart rate sensor in a cool and dry place. To prevent snap oxidation, do not store the heart rate sensor wet in non-breathing material, such as a sports bag. Do not expose the heart rate sensor to direct sunlight for extended periods.

Service

During the two-year guarantee/warranty period we recommend that you have service done by an authorized Polar Service Center only. The warranty does not cover damage or consequential damage caused by service not authorized by Polar Electro. For further information, see Limited International Polar Guarantee (page ?).

For contact information and all Polar Service Center addresses, visit www.polar.com/support [http://www.polar.com/support] and country-specific websites.

Register your Polar product at http://register.polar.fi/ to ensure we can keep improving our products and services to better meet your needs.

The username for your Polar Account is always your email address. The same username and password are valid for Polar product registration, polarpersonaltrainer.com, Polar discussion forum and newsletter registration.

Batteries

The **Polar RC3 GPS training computer** has an internal, rechargable battery. Rechargeable batteries have a limited number of charge cycles. You can charge and discharge the battery over 300 times before a notable decrease in its capacity. The number of charge cycles also varies according to use and operating conditions.

At the end of the working life of the product Polar encourages you to minimize possible effects of waste on the environment and human health by following local waste disposal regulations and, where possible, utilizing separate collection of electronic devices. Do not dispose of this product as unsorted municipal waste.

The **Polar H2/H3 heart rate sensor** has a user changeable battery. To change the battery yourself, please follow the instructions carefully as instructed in chapter Change the Heart Rate Sensor Battery.

The batteries for the **CS speed sensor W.I.N.D.** and **CS cadence sensor W.I.N.D.** cannot be replaced. Polar has designed the sensors to be sealed in order to maximise mechanical longevity and reliability. The sensors have long-life batteries inside. To purchase a new sensor contact your authorized Polar Service Center or retailer.

For battery information of the **Polar s3+ stride sensor**, consult the user manual for the product in question.

Keep the batteries away from children. If swallowed, contact a doctor immediately. Batteries should be disposed of properly according to local regulations.

Change the Heart Rate Sensor Battery

To change the battery of the heart rate sensor yourself, carefully follow the instructions below:

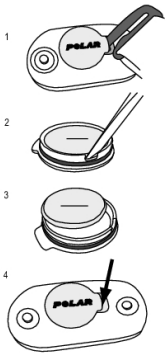
When changing the battery, make sure the sealing ring is not damaged, in which case you should replace it with a new one. You can purchase the sealing ring/battery kits at well-equipped Polar retailers and authorized Polar Services. In the USA and Canada, the additional sealing rings are available at authorized

Polar Service Centers. In the USA the sealing ring/battery kits are also available at www.shoppolar.com.

When handling a new, fully charged battery, avoid clasp-like contact, i.e. simultaneously from both sides, with metal or electrically conducting tools, like tweezers. This may short circuit the battery, causing it to discharge more rapidly. Typically, short circuiting does not damage the battery, but it may decrease the capacity and the lifetime of the battery.

Changing Heart Rate Sensor Battery

1. Lever the battery cover open by using the clip on the strap.
2. Insert the battery inside the cover with the negative (-) side outwards. Make sure the sealing ring is in the groove to ensure water resistance.
3. Align the ledge on the battery cover with the slot on the connector and press the battery cover back into place. You should hear a snap.



⚠
Danger of explosion if the battery is replaced with wrong type.

Precautions

The Polar RC3 GPS training computer shows your performance indicators. The training computer is designed to indicate the level of physiological strain and recovery during and after an exercise session. It measures heart rate, speed and distance. It also measures running cadence when used with s3+ stride sensor and cycling cadence when used with a CS cadence sensor W.I.N.D.. No other use is intended or implied.

The training computer should not be used for obtaining environmental measurements that require professional or industrial precision.

Interference During Training

Electromagnetic Interference and Training Equipment

Disturbance may occur near electrical devices. Also WLAN base stations may cause interference when training with the training computer. To avoid erratic reading or misbehavior, move away from possible sources of disturbance.

Training equipment with electronic or electrical components such as LED displays, motors and electrical brakes may cause interfering stray signals. To solve these problems, try the following:

1. Remove the heart rate sensor strap from your chest and use the training equipment as you would normally.
2. Move the training computer around until you find an area in which it displays no stray reading or does not flash the heart symbol. Interference is often worst directly in front of the display panel of the equipment, while the left or right side of the display is relatively free of disturbance.
3. Put the heart rate sensor strap back on your chest and keep the training computer in this interference-free area as much as possible.

If the training computer still does not work with the training equipment, it may be electrically too noisy for wireless heart rate measurement. For further information, see www.polar.com/support [http://www.polar.com/support].

Parts of RC3 GPS are magnetic. It may attract metallic materials and it's magnetic field may interfere with a compass. To avoid interference, it is recommended to wear your compass on one arm (at the level of your chest) and your RC3 GPS on the other arm's wrist. Do not place credit cards or other magnetic

storage media near RC3 GPS, because information stored on them may be erased.

Minimizing Risks When Training

Training may include some risk. Before beginning a regular training program, it is recommended that you answer the following questions concerning your health status. If you answer yes to any of these questions, we recommend that you consult a doctor before starting any training program.

- Have you been physically inactive for the past 5 years?
- Do you have high blood pressure or high blood cholesterol?
- Are you taking any blood pressure or heart medication?
- Do you have a history of breathing problems?
- Do you have symptoms of any disease?
- Are you recovering from a serious illness or medical treatment?
- Do you use a pacemaker or other implanted electronic device?
- Do you smoke?
- Are you pregnant?

Note that in addition to training intensity, medications for heart conditions, blood pressure, psychological conditions, asthma, breathing, etc., as well as some energy drinks, alcohol, and nicotine may also affect heart rate.

It is important to be sensitive to your body's responses during training. **If you feel unexpected pain or excessive fatigue when training, it is recommended that you stop the training or continue at a lighter intensity.**

Note! If you are using a pacemaker, you can use Polar training computers. In theory interference to pacemaker caused by Polar products should not be possible. In practice no reports exist to suggest anyone ever having experienced interference. We cannot however issue an official guarantee on our products' suitability with all pacemakers or other implanted devices due to the variety of devices available. If you have any doubts, or if you experience any unusual sensations while using Polar products, please consult your physician or contact the implanted electronic device manufacturer to determine safety in your case.

If you are allergic to any substance that comes into contact with your skin or if you suspect an allergic reaction due to using the product, check the listed materials in Technical Specifications (page 53). To avoid any skin reaction to the heart rate sensor, wear it over a shirt, but moisten the shirt well under the electrodes to ensure flawless operation.

Your safety is important to us. The shape of the s3+ stride sensor is designed to minimize the possibility of it getting caught in something. In any case, be careful when running with the stride sensor in brushwood, for example.

The combined impact of moisture and intense abrasion may cause a black color to come off the heart rate sensor's surface, possibly staining light-colored clothes. If you use perfume or insect repellent on your skin, you must ensure that it does not come into contact with the training computer or the heart rate sensor.

WARNING: This product and its packaging contain chemicals known to the State of California to cause cancer, birth defects or reproductive harm. This notice is provided in accordance with California's Proposition 65. More information: http://www.polar.com/regulatory_information

Technical Specifications

Training computer

Battery type:	250 mAH Li-Pol rechargeable battery The battery is not replaceable
Operating time:	up to 12 hours in continuous use with the GPS function on
Operating temperature:	-10 °C to +50 °C / 14 °F to 122 °F

Training computer materials:	PMMA lens with hard coating in top surface, training computer body (ABS+GF)+TPU / (PC+ABS)+GF / (TPU+PC) +TPU / ABS+PC / Aluminium / Stainless steel
Wrist strap and buckle materials:	Polyurethane (TPU) and stainless steel
Watch accuracy:	Better than ± 0.5 seconds / day at 25 °C / 77 °F temperature
GPS accuracy:	distance +/-2%, speed +/-2km/h
Sample rate:	1 sample/sec
Accuracy of heart rate monitor:	± 1% or 1 bpm, whichever larger. Definition applies to stable conditions.
Heart rate measuring range:	15-240 bpm
Current speed display range:	0-36 km/h or 0-22.5 mph (when measuring speed with s3+ stride sensor) 0-127 km/h or 0-79 mph (when measuring speed with CS speed sensor) 0-303 km/h or 0-188.5 mph (when measuring speed with GPS)
Water resistance:	Water proof IPX7 Not suitable for bathing or swimming. Protected against wash splashes and raindrops. Do not immerse the training computer in water. Using the training computer in excessive rainfall may cause interference on GPS reception.

Training computer limit values

Maximum number of files:	99
Maximum time recorded to one file:	99 h 59 min 59 s
Maximum time recorded to files with different sensor combinations:	
Heart rate	253 h
Heart rate + stride sensor	52 h
Heart rate + GPS	31 h
Heart rate + CS speed sensor	63 h
Heart rate + CS cadence sensor	139 h
Heart rate + stride sensor + GPS	28 h
Heart rate + GPS+ CS speed sensor	31 h
Heart rate + GPS + CS cadence sensor	28 h
Heart rate + CS speed sensor + CS cadence sensor	52 h
Heart rate + GPS + CS speed sensor + CS cadence sensor	28 h
Stride sensor	63 h
Stride sensor + GPS	31 h
GPS	35 h
GPS + CS speed sensor	35 h
GPS + CS cadence sensor	31 h
GPS+ CS speed sensor + CS cadence sensor	31 h
CS speed sensor	79 h
CS cadence sensor	253 h
CS speed sensor + CS cadence sensor	63 h
The training computer stores the data in one second intervals.	
Maximum number of laps recorded in one training session:	99
Maximum number of automatic laps recorded in one training session:	99
Total distance:	99999.99 km / 99999.99 mi
Total duration:	9999 h 59 min 59 s
Total calories:	999 999 kcal
Total training files count:	65535

Heart rate sensor

Battery life:	1600 h
Battery type:	CR2025
Battery sealing ring:	O-ring 20.0 x 0.90 Material Silicone
Operating temperature:	-10 °C to +50 °C / 14 °F to 122 °F
Connector material:	ABS
Strap material:	38% Polyamide, 29% Polyurethane, 20% Elastane, 13% Polyester

Water resistance:	30 m (Suitable for bathing and swimming). The Polar H3 heart rate sensor does not measure heart rate in water.

The Polar RC3 GPS training computer applies the following patented technologies, among others:

- OwnIndex® technology for fitness test.
- OwnCal® personal calorie calculation.

Polar WebSync Software and USB Cable

System Requirements:	Operating system: Microsoft Windows XP/Vista/7 or Mac OS X 10.5 (Intel) or newer Internet connection Free USB port for the USB cable

Water resistance

Water resistance of Polar products is tested according to International IEC 60529 IPX7 (1m, 30min, 20ºC). Products are divided into four different categories according to water resistance. Check the back of your Polar product for the water resistance category and compare it to the chart below. Please note that these definitions do not necessarily apply to products of other manufacturers.

Marking on case back	Water resistant characteristics
Water resistant IPX7	**Not suitable for bathing or swimming. Protected against wash splashes and raindrops. Do not wash with a pressure washer.**
Water resistant	Not suitable for swimming. Protected against wash splashes, sweat, raindrops etc. Do not wash with a pressure washer.
Water resistant 30 m/50 m	Suitable for bathing and swimming
Water resistant 100 m	Suitable for swimming and snorkeling (without air tanks)

Frequently Asked Questions

Question/Problem	Answer/Solution
How can I best catch satellite signals?	Wear the training computer with its face upwards on your wrist. **Keep your wrist stationary** and raised above the level of your chest during the search. Stand still and hold the position until the training computer has found the satellite signals. See Starting a Training Session (page 13) for more information.
How do I ensure a good GPS signal reception in RC3 GPS?	The best GPS signal reception can be reached when training in an open area where there are no obstructions for the satellite signals. Due to the nature of the GPS signal, for example hills, tall buildings, and trees may block the satellite signal. Rain, fog, and snow may also affect the signal quality. Wear the training computer with its face upwards on your wrist.

The training computer does not find or it takes long time to find the satellite signals	Something in your surroundings may be blocking GPS satellite signal reception (e.g. underpasses, tall buildings, terrain or forested areas). Go outdoors and away from tall buildings and trees. In good conditions, acquiring satellite signals for the first time typically takes 30-60 seconds. Note that the GPS reception does not work indoors.
The speed or distance readings are incorrect or irregular	Something in your surroundings may be blocking GPS satellite signal reception (e.g. underpasses, tall buildings, terrain or forested areas). If the training computer cannot locate the satellite signals, it will not be able to calculate its location. Distance is measured between the last location before the shadow area and the first location after the shadow area in a straight line.
What is the measurement accuracy of Polar RC3 GPS?	Polar RC3 GPS training computer measurement accuracy is +/- 2% for distance and +/- 2km/h for speed. When moving at low speeds (below 3km/h) accuracy of this level can sometimes cause relatively big errors. However, with higher speeds the measurement is more accurate. In order to improve the accuracy of the position calculation, Polar RC3 GPS utilizes the Wide Area Augmentation System (WAAS). WAAS is an extremely accurate navigation system in North America. It is widely used e.g. in aviation to enable precision approaches for airplanes. WAAS Wide-area Reference Stations, which are located on the earth, monitor and collect information on the GPS signals and send correction messages to the two Wide-area Master Stations. These two master stations then send the message forward to geostationary satellites, which in turn send the correction signals to WAAS-enabled GPS receivers, like Polar RC3 GPS.
Low battery is displayed	This notification is displayed when the training computer has enough charge for one hour of training with the GPS function on. It is recommended to charge the training computer before starting a new training session. For more information, see Training Computer Battery (page 9).
Low battery, **GPS switched off** is displayed	The training computer charge is too low for continuing the recording of the training session with the GPS function on. The training computer sounds and backlight are automatically deactivated and the training computer switches the GPS function off. You can still use Available Accessories (page 6) and carry out the training session. A new training recording cannot be started before charging the training computer. For more information, see Training Computer Battery (page 9).

Recording stopped, **Battery Empty** is displayed	The charge is critically low. The training computer stops recording the training session and saves the training data and then goes to sleep mode. Charge the training computer. For more information, see Training Computer Battery (page 9).
The training computer display is blank	The training computer battery is empty and it has gone to sleep mode. Charge the training computer. If the battery is totally drained, it may take a while for the charging animation to appear on the display. For more information on charging the battery, see Training Computer Battery (page 9).
Check heart rate sensor! is displayed	• Make sure the heart rate sensor strap has not loosened during exercise. • Make sure the electrodes of the heart rate sensor are wet. • Make sure the electrodes of the heart rate sensor are clean and undamaged. If you have done all of the above-mentioned actions, and the message still appears and heart rate measurement does not work, the battery of your heart rate sensor may be empty. For further information, see Batteries (page 51).
Check speed sensor! is displayed	Make sure the position and distance of the sensor to the magnet are appropriate. If the message still appears you may have exceeded 3000 riding hours and the battery is empty.
Check cadence sensor! is displayed	Make sure the position and distance of the cadence sensor to the crank magnet are appropriate. If the message still appears, you may have exceeded 3000 riding hours and the battery is empty.
Check stride sensor! is displayed	Make sure the sensor is correctly positioned on your foot. If the message still appears, the battery may be empty. See the user manual for Polar s3+ stride sensor for instructions on changing the battery.
The heart rate reading becomes erratic, extremely high or shows nil (00)	• Make sure the heart rate sensor strap has not loosened during exercise. • Make sure the textile electrodes in the sports apparel fit snugly. • Make sure the electrodes of the heart rate sensor strap are moistened. • Make sure the heart rate sensor is clean. Strong electromagnetic signals can cause erratic readings. For further information, see Precautions (page 52). • If the erratic heart rate reading continues despite moving away from the source of disturbance, slow down your speed and check your pulse manually. If you feel it corresponds to the high reading on the display, you may be experiencing cardiac arrhythmia. Most cases of arrhythmia are not serious, but consult your doctor nevertheless. • A cardiac event may have altered your ECG waveform. In this case, consult your doctor.

The speed, distance or cadence readings are irregular	Temporary electromagnetic interference in your current surroundings can cause irregular readings. WLAN base stations may cause interference. To avoid erratic reading or misbehaviors, move away from possible sources of disturbance.
I do not know where I am in the menu	Press and hold BACK until the time of day is displayed.
There are no reactions to any buttons	Reset the training computer by pressing UP, DOWN, BACK and LIGHT buttons simultaneously for two seconds until the display fills with digits. Press any button and set the time and date. All other settings are saved.

Limited International Polar Guarantee

- This guarantee does not affect the consumer's statutory rights under applicable national or state laws in force, or the consumer's rights against the dealer arising from their sales/purchase contract.
- This limited Polar international guarantee is issued by Polar Electro Inc. for consumers who have purchased this product in the USA or Canada. This limited Polar international guarantee is issued by Polar Electro Oy for consumers who have purchased this product in other countries.
- Polar Electro Oy/Polar Electro Inc. guarantees the original consumer/purchaser of this device that the product will be free from defects in material or workmanship for two (2) years from the date of purchase.
- **The receipt of the original purchase is your proof of purchase!**
- The guarantee does not cover the battery, normal wear and tear, damage due to misuse, abuse, accidents or non-compliance with the precautions; improper maintenance, commercial use, cracked, broken or scratched cases/displays, armband, elastic strap and Polar apparel.
- The guarantee does not cover any damage/s, losses, costs or expenses, direct, indirect or incidental, consequential or special, arising out of, or related to the product.
- Items purchased second hand are not covered by the two (2) year warranty, unless otherwise stipulated by local law.
- During the guarantee period, the product will be either repaired or replaced at any of the authorized Polar Service Centers regardless of the country of purchase.

Guarantee with respect to any product will be limited to countries where the product has been initially marketed.

CE

This product is compliant with Directives 1999/5/EC and 2011/65/EU. The relevant Declaration of Conformity is available at www.polar.com/support [http://www.polar.com/support].

Regulatory information is available at www.polar.com/support [http://www.polar.com/support].

To see the RC3 GPS-specific certification and compliance information, select **MENU** > **Settings** > **General settings**, and press and hold LIGHT for two seconds.

This crossed out wheeled bin marking shows that Polar products are electronic devices and are in the scope of Directive 2012/19/EU of the European Parliament and of the Council on waste electrical and electronic equipment (WEEE) and batteries and accumulators used in products are in the scope of Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators. These products and batteries/accumulators inside Polar products should thus be disposed of separately in EU countries. Polar encourages you to minimize possible effects of waste on the environment and human health also outside the European Union

by following local waste disposal regulations and, where possible, utilize separate collection of electronic devices for products, and battery and accumulator collection for batteries and accumulators.

This marking shows that the product is protected against electric shocks.

Polar Electro Oy is a ISO 9001:2008 certified company.

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This product is covered by the following patent documents: FI 111514B, DE19781642T1, GB2326240, HK1016857, US6277080, US20070082789, EP1795128, US20090278734, EP2116862, FI114202, US6537227, EP1147790, HK1040065, FI115289, EP1127544, US6540686, HK1041188, FI 110303, US6104947, EP0748185, JP3831410, FI20105796, US20120010478, EP2407217, EP08879081.1, US13/139541, WO2010072883, US6584344, US2011021419, EP2280770. Other patents pending.

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